THE LANCET.

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LECTURES

ON

HUMAN EMBRYOLOGY,

ILLUSTRATED BY COMPARATIVE ANATOMY.

Delivered at the Jardine des Plantes, Paris, 1835.

BY M. FLOURENS.

LECTURE I.

Introductory Remarks.—The Revelations of Comparative Anatomy in the Study of of Man.—Illustrative Instances.—The Phases of the Human Fœtus.

GENTLEMEN,—I approach you to fulfil the duties of a new session, and to lead you to reflections on a new subject. The study of the form and structure of the organs of man—his anatomy—and the assignment of a duty or function in the animal economy to each of those organs, do not alone comprehend a complete course of anthropology. To the anatomy and physiology of man, students of medicine ought to superadd an attentive consideration of the successive developments through which he passes, taking him up in the ovum, and not abandoning him until all his organs have completed the transitions of the different periods of life. To whatever you have heard, therefore, on previous occasions relative to the former of these subjects, I shall now add for your instruction a few lectures on human embryology or ovology. Such a proceeding will then leave nothing for the physiologist to present to your notice relating to the person of man, but his researches into the varieties of the human race. The comparison of the different races of man has never, to my knowledge, been made the subject of a special course, and it is within a few years only that the richness of our museum has permitted us to hope that we may one day be enabled to discuss and illustrate this most interesting part of the science. But yet, deficient is our collection. How many hiatuses are there to be filled up in it! Not attaching sufficient importance to anthropology, our naturalist voyagers have generally neglected to collect either information or preparations which might serve to throw some light on the history of man; but thanks to the happy impulsion which the science has received from the genius of CUVIER, and thanks also to the instructions given by the directors of our museum to its travellers, our series of preparations is becoming more perfect every year, and we shall be in a condition to take up this part of the subject next year. We do not conceal from ourselves the various difficulties we shall have to encounter, but we hope that your indulgence will render the greater part of them less formidable. Being convinced of this great truth, that comparative anatomy alone can reveal in a perfect and complete manner the structure and physiology of any one organ, we purpose to unite the natural history of man with that of animals. We will study each function in the class or species where it is found free from every complication, and we will endeavour to follow it through the whole series of animated beings, until we shall have arrived at animals in whom the functioning organ presents difficulties which are otherwise insurmountable. Permit me to develop this proposition, and to illustrate it by a few examples of the necessity of comparing different organizations together.

In the first place, when we cast a glance over animated nature, we cannot fail to be convinced that the proportion of organs distributed to each being bears a

direct relation to the functions which those organs are destined to fulfil. The muscular force, for example, is proportioned to the oxygenation of the blood, and we see this oxygenation varying according to the different species of animals, and according as each of them may require a different degree of strength. The muscular system, always under the dependence of the respiratory system, becomes augmented or diminished with the latter, and hence the bird in whom the descending aorta, as well as the pulmonary artery, respires, is endowed with a muscular system excessively energetic. Numerous bloodvessels, and a quantity of membranous pouches or bags containing air, extending along the abdomen, and even penetrating into the interior of several bones, —everything, in a word, concurs to favour the oxygenation of the blood in that animal. And remark well that this latter function is exercised in a less perfect manner as we examine it in the mammalia, the fish, the reptile, or the moluscum, &c. In the first we find a perfect circulation: the whole mass of venous blood receives the vivifying action of the oxygen in the pulmonary parenchyma; in the second, the medium by which the animal is surrounded, alone constitutes an obstacle to the activity of hæmatosis; finally, in reptiles, the respiration is incomplete, and a portion of the venous blood is withdrawn from the influence of oxygenation. Do not the facts which I have just mentioned confirm the truth of our proposition, and does not experience prove every day that in animals the muscular force is in direct relation with the oxygenation of the blood or respiration. At first view we might be inclined to regard fishes as constituting an exception to this general law, from the facility of movement, from the locomobility, they enjoy. We might, perhaps, attribute to them a greater respiratory energy than to the mammalia, but we shall be convinced of the universality of the law, by reflecting on the slight efforts with which a fish can perform the most extensive and rapid motions, on account of the nature of the fluid which surrounds him.

Let us now turn to the brain. Here we find a new proof of the direct relation that exists between the function and the apparatus destined to perform it. Of all animals, birds have the cerebellum the most developed, and their medulla oblongata exhibits a considerable bulk; now physiology teaches us that the cerebellum is the part of the brain which presides over motion, and the medulla oblongata the portion of the nervous system that governs respiration. The mammalia, and in particular man, are endowed with the highest order of intellectual qualities, and in this class of animals the cerebral lobes present an enormous volume.

If from physiology we turn to anatomy, we shall soon observe that there are several organs in the human body, whose extreme minuteness prevents us from studying with advantage their mode of development or structure; thus, for example, the organization of the tooth in man was never well understood or determined, and it was only in consequence of the labours of TENON on the tooth of the horse, and of M. CUVIER on that of the elephant, that we have been able to distinguish in a satisfactory manner, by means of analogy, the secreting and secreted parts, so confounded together in the human tooth.

Does not the structure of the lung also evidently demonstrate the necessity of our having recourse to comparative anatomy? Could any scalpel, be it ever so practised, have brought to light the disposition of the pulmonary cells, and their mutual relations, if it had never acted on any other being than man? But remember how MALPIGHI, by studying the lungs of the batrachia and reptiles, where the cells form as it were one single sac, and reasoning from analogy, has been able to explain their disposition in the higher classes and in man.

The os incisivum affords us another example which is worthy of notice, disappearing as it does in the adult by the approximation of the superior maxillary bones, it leaves no trace of its existence in man and the quadrumana. In the fœtus it has existed, and the observer duly endowed with the philosophic spirit of comparative anatomy, and guided by analogy, can discover it in man at a fixed period of intra-uterine life. Although the os incisivum, struck by a kind of atrophy, disappears in the human adult, yet it acquires a considerable volume and size in ruminating animals, and in birds it arrives at its maximum of development. We know, in short, that it forms the superior part of the beak in the great family of winged animals. Even the whole osseous system in its successive development may be compared with the analogous changes in man and other animals. In fishes the bones remain in a completely rudimental state, but they become developed with greater perfection as we continue to ascend in the animal scale; and if we consider man in all the phases through which he must pass to arrive at the state of a mammalia, we shall find him successively presenting several characteristics of the worm, the reptile, the fish, &c.

In opposing man also to the other animals, we are able to explain several points

of his physiology: thus we can understand all the conditions of the vertical position by which he is so eminently distinguished. See how the occipital foramen, which in all other animals is placed behind, approaches the median line of the brain in man. See how the os calcis forms a projection backwards, in order to give attachment to the powerful muscles of the calf, which in no other animal attain so considerable a degree of development; the form and attachments of the gluteal muscles also point out what must be the posture of man during progression. Here indeed we may well apply to the physical man what BUFFON said of the moral: "Without animals we should find it still more difficult to understand man than we do."

The examples which we have just mentioned are, it is to be hoped, more than sufficient to convince you of the necessity of comparative anatomy for the explanation of physiological phenomena; but if by chance any doubt should still remain in your minds upon this subject, they will, I expect, be dissipated without difficulty, when, during the course of lectures I am about to deliver, I shall have occasion to discuss that part of the science which is known by the names of ovology and embryology. But before we commence the study of the reproductive organs, male and female, let us mention, by way of anticipation, that our knowledge of the ovum, and its various phases of development, is entirely founded on comparative analogy, and that by means of analogy we have been able to throw some light on the formation and development of the human ovum, which we should otherwise have found it impossible to follow through its progressive changes. At an early period of the science, and for a great length of time, religious prejudices invincibly opposed the opening of the dead body, and it was only upon animals of an inferior class, that physicians or naturalists could glean some ideas, more or less exact, of the economy of man; and even at the present day we cannot observe his intra-uterine development, unless favoured by accident. In other animals we can interrupt gestation as we please, acquire a perfect and exact knowledge of the phases through which the fœtus passes, and, as I observed a short time ago, ascend by analogical reasoning to man,—an analogy the result of which is surprisingly exact, for the facts collected at various periods of pregnancy all tend to confirm it.

We have already hinted at the manner in which the human fœtus, before it can reach its perfect development, has to pass through different degrees of the animal scale. In the beginning exhibiting the state of a vibrion, he presents us with characters more or less resembling those of that animalcule. He then assumes others which belong to the molusca. At a later period his arterial system gives us a more or less perfect idea of the disposition observed in the reptile. At a period still more advanced, when the diaphragm begins to appear, the heart, whose size is always inversely proportionate to its age, the heart, I say, passes through a series of successive developments, which at length conduct it to that form which it is no longer to quit. Thus the auricles become divided into two cavities, leaving a communication between them called the foramen ovale. Thus, at a later period, this communication or opening is closed by a valve, which applies itself against the inferior portion, and gives the fœtus one of the characters which is peculiar to him as a mammalia; but during these periods he merely passes through certain states of development which become permanent in animals enjoying a less elevated rank in the animal scale, such as fishes, &c. We must, however, defer any notice of these interesting changes, until, having described the reproductive organs and ovology, we shall have occasion to occupy ourselves with embryology.

Thus do the sciences approach one another, in proportion as they advance towards perfection. PERRAULT and DUVERNEY were well acquainted with the truth of this assertion. HALLER and VICQ. D'AZIER, the latter in particular, compared together the different species of animals; finally, CUVIER, and the modern school, have arrived by this means at the solution of several problems, of which we should otherwise have remained ignorant for a great length of time.

The evident object of these different changes in the organization of man, is to constitute and establish the difference between him and other animals. Moreover, it is only by means of the intimate junction existing between all their organs, that certain species, the most elevated in the animal scale, can exist; this is the absolute condition of their existence, for in them we see the vitality of the muscles depend on the nerves; the nerves depend on the medulla oblongata,—life itself, in a word, emanating, if I may be permitted the expression, from an extent of a few lines of this medulla oblongata, as my experiments and observations have proved. From the very circumstance of their organization, this is not the case in inferior animals, as we shall presently see.

PHRENOLOGICAL DEVELOPMENTS

OF THE LATE

POISONER AT BRISTOL.

To the Editor of THE LANCET.

SIR,—The whole history of the atrocious murder of Mrs. Clara Anne Smith, perpetrated by the late Mrs. Burdock,—the very unlooked-for detection of the murderer, after a lapse of fourteen months, by the exhumation of the corpse,—the conduct of the woman before, at, and after the trial, together with her behaviour when under sentence and at her execution,—form an era in the annals of crime, and I am induced to give a brief notice respecting her, as it may fall into the hands of many persons who have had no other opportunity of perusing an account of her. That she was a woman of no ordinary feelings and character all must acknowledge, and the cranium of such a wretch cannot but afford an interesting subject of inquiry to the disciples of Gall and Spurzheim.

For myself, I neither advocate nor deny the reality of craniology, but I feel no difficulty in making the assertion, that if the head of Mrs. Burdock had exhibited manifestations or organs which were creditable to humanity, then the whole system might fairly be considered as a mere bubble. How far the general and particular developments of her skull tend to prove a contrary position, I shall leave to the judgment of your readers. It is, however, but fair to add, from what I know of her conduct and habits, from having attended her, independently of the very minute and copious details which have appeared in the public prints, that with a trifling exception all the facts of her character and developments agree decidedly and exactly together. She was always exceedingly handsome featured; indeed she may have been considered when young, as quite beautiful, and even after her execution the lines of her face continued to be strikingly fine. At about nineteen years of age she was detected in robbing her master, and the stolen goods were found in her box, although she had previously tried to fix the theft upon a fellow-servant. After she had lost her place and could obtain no character, she commenced street-walking. She had two natural children, and it is generally considered that neither of them is the child of the reputed father. She was in a state of the darkest ignorance, not even knowing her A B C, and it is probable that, except when a child (and even that is conjectural), she never had the slightest religious instruction, so that these usual checks to vicious habits were altogether absent. She was such an habitual liar, even in mere trifles, that the jailer declared that "he believed she could not speak the truth." In court her appeals to the Deity in protestation of her innocence were horribly revolting, considering that the evidence was so decisive as to her guilt that no one could doubt it. During three very long days' trial, lasting from nine in the morning until twelve at night, she evinced the utmost calmness and attention, frequently rising (for she had a chair) to make remarks to her counsel upon the passing evidence. Even the exhibition of the skull, the stomach, and the intestines of her victim in court, caused not the slightest visible emotion or change in her countenance. Whilst she was at the bar she ate sandwiches and drank a glass of beer, which she carried to her mouth with the utmost steadiness and indifference. After condemnation, having descended from the pen into the room below, she burst out into a furious rage, swore and blasphemed, cursed the recorder and the counsel both *pro and con*, damned her advocates for not seizing the favourable points in her case, protested that she should be murdered, and then, alluding to the young servant girl, said, "Well, I shall have the pleasure of seeing her burning in hell for saying she saw me put the arsenic into the gruel," an act which she afterwards herself confessed, being unaware at the moment that the witness was behind her when she did it. On arriving at the condemned cell she ate heartily, drank a glass of beer, and wanted another, which was refused, went to bed, and slept soundly. The next morning she said, "Now let my children and friends come and take leave of me, for I should not like to be bothered to-morrow, and may not live till to-night." She then addressed her attorney, and said, "Come, Sir, now let us to business; about the 500*l.* in the bank; you know that as to their keeping it from me, *that* is all stuff; what do I owe you; what will remain when all expenses are paid?" The answer was given conjecturally. She then turned round to her brother, and said, "Jem, you mind and be sure to tax the lawyer's bill." She appears to have meditated suicide, judging by the expression just now mentioned, and by her anger at having a penknife taken from her. She inquired who made the jail-coffin and said to her brother, "Mind you get a good strong one, but remember it is not to cost more than two pounds. Let it be full-sized and lined comfortably with flannel, and mind that I have a warm shroud, and don't let them screw me down

too tight; order it directly, and let them bring the coffin here; I will have it by my bedside."

That Wade who lived with her was accessory to the murder was always suspected, and her confession proved the truth of the suspicion. At this period they were both so poor that they pawned their clothes. After the murder, she had the policy to preserve the same outward appearance as before, although they must have obtained possession of upwards of a thousand pounds in sovereigns, which were sewed up in the clothes, and deposited in the trunks of Mrs. Smith. Indeed nearly 3000*l.* have vanished, no one can tell how. Wade soon began to make a show of wealth, wore the murdered lady's gold watch, to which he appended a chain-guard and seals which cost 40*l.*, paid 300*l.* to embark in trade, and boasted everywhere of his riches. The murderess immediately perceived that he was not to be trusted. In two months he was taken suddenly ill, and two hours after the seizure he was a corpse! The general opinion now is that she had given "a few pinches" of the yellow arsenic out of the fatal blue paper to him also, and an attempt to ascertain the truth of the rumour would have been made, had not a whisper prevailed that he had already been exhumated and dissected. When she married Burdock, she placed her monies in the hands of trustees, and let him have some of it on a cognovit security, but fearing that she should lose by the transaction, she arrested him some four months ago, and thus it chanced that they were in the same prison together, as she peremptorily refused, even to the last, permission to the trustees to release him, and there he remains at this moment. Burdock repaid this treatment, by standing within a few yards of her to witness the execution. At the moment when she was about to ascend the drop, it began to rain, and she peremptorily refused to move without an umbrella!

Every one who saw her in Court was struck with her very low and miserably-developed forehead.

The following is an estimate of her cranial organs:—

Philoprogenitiveness, adhesiveness, caution or circumspection, conscientiousness, ideality, supernaturality, wit, form, colour	0
Benevolence, causality, comparison, not only nought but depressed below nought	0
Destructiveness, self-esteem	3*
Combativeness, secretiveness, firmness or determination, acquisitiveness	3*
Constructiveness, number or calculation	2
Individuality, veneration, hope	1½
Inhabitiveness or concentrativeness, approbation, locality or space, order, time	1
Language	0

Size, time, weight, measure, or the organs of proportion, were all so small, that they may be considered as altogether wanting.

There is a great width and volume from side to side, and a corresponding shortness from front to back, giving to the whole head an appearance of masculine force and energy.

In a skull exhibiting selfishness, pride, covetiveness, concealment, and amativeness, in fact all the brutal propensities in exuberance, with scarcely any evidence of countervailing moral weight, a frightful career of vice during life, and an ignominious death, would have been probably anticipated by the phrenologist. The ruling passion in this extraordinary woman appears to me to have been the love of money; to obtain which she risked and forfeited her life. I have to add, that the phrenologist is indebted to the preserving efforts of Mr. S. Stutchbury, the Curator of the Bristol Institution, for a bust of the woman, which was obtained only with very great difficulty. But five casts exist and the mould is destroyed: of these, one, by his kindness, is deposited in my anatomical museum at the *Bristol Infirmary*, where I have the honour to be senior Surgeon. I remain, Mr. Editor, yours very truly,

RICHARD SMITH.

38 Park-street, Bristol.
May 23, 1835.

* These organs were even greater than 3. They were enormously developed.

RINGWORM IN IRELAND.

IPECACUANHA WATER DRESSING &c.

To the Editor of THE LANCET.

SIR,—Having read in your journal of April 4 a letter from Surgeon Moss, of Windsor, on the subject of ringworm, I address to you a few observations on the treatment and causes of a complaint which has excited so much interest lately, from its prevalence in one of the great London institutions. I decidedly agree (from my own experience) with Mr. Moss in considering improper food to be a fruitful source of diseases of the skin and scalp.

However, I do not think that it is from

the use of food of too stimulating a character that the mischief is most likely to arise; but from the use of a description of food which from its nature is decidedly displeasing to the sensitive alimentary tube, and totally unfit for forming a proper and agreeable nutriment for the body.

Mr. Moss seems to think that the great consumption of oatmeal as an article of diet in Scotland has been the cause of the prevalence of "the musical malady" in that country. But I can assure you that the itch is a disease which it is not by any means rare to find among the Irish, who riot on potatoes and buttermilk. It is in this country of most frequent occurrence among the lower classes, and is the result of contagion, poverty, wretched diet, and insufficient clothing.

Nothing ever surprised me so much as the state of the unfortunate victims of a nonsensical and antiquated custom which I witnessed on a visit to London last summer, for the first time, in order to attend Mr. Warburton's committee as a witness; I was indeed astonished to see them walking about the streets of the "modern Babylon" in the ridiculous costume of *Christ's Hospital*, with their heads bare to the rays of a burning sun at one moment, and at another to the drenching of a cold shower, while their caps were stuck under their girdles immediately over the stomach, a recompense, probably, to that organ for the daily miserable allowance of meat burned to a cinder, and such other stuff as the dietary in that establishment included.

I could scarcely believe the evidence of my senses when I saw that in the capital of Great Britain, in the nineteenth century, such an absurd and mischievous system existed.

The blue-coat boys will, I am sure, have much cause to bless the day when you first drew the attention of the public to their miserable state.

Since I settled in this district where there are a number of poor, badly fed, and badly clothed peasantry, I have had some experience of the disease called "scald-head." I have been resident in this town only rather more than a year, and I have already seen above one hundred cases of "Tinea Capitis," of which eighteen cases came under my care.

Most of the persons whom I have met with who were afflicted with this disease, were young persons from the age of seventeen downwards, being generally about from eight to ten years of age. Except in some very few instances, the disease had existed during from three to six years. Many of these unfortunate sufferers were wretchedly clothed, and were either in the habit of going entirely bare-headed, or they wore only a piece of an old felt hat without a crown. I have seen only one case of the disease in a female. The diet generally of these persons was potatoes, sometimes with a little milk, sometimes with a salt herring, but most frequently potatoes without any accompaniment, and of bad quality. The constant use of food of this kind, produces a morbid irritability of the stomach and alimentary canal generally, which by their sympathy with the skin, place this latter surface in a state which fits it for taking on diseases of different kinds, particularly those of a contagious and chronic character.

In fourteen out of the eighteen cases which I had to treat, the whole scalp was involved in the disease, and covered with a thick irregular incrustation; the outer surface in many places broke down under the fingers into a kind of powder like brick-dust. The hair was generally thin; in one case it was absent altogether: in the cases where it was permitted to grow to any length, it was firmly embedded in the diseased mass at its roots. The under surface of the scab adhered so closely to the scalp, that it was impossible to detach it from the affected part until it was rendered soft by repeated poulticing.

The mode of treatment which I have found to be most successful, was to commence with free purging for two or three days, after which I had the diet improved as soon as possible, by getting for the patient fresh meat, broths, well-boiled vegetables, particularly of the cabbage tribe, and bread. I then commenced giving ipecacuanha in doses of two grains, every six hours, which I afterwards increased to three grains every five hours, if necessary. I do not know any medicine so decidedly beneficial in diseases of the skin and scalp as ipecacuanha. It is a gentle tonic, a sudorific, and a most admirable quieter of an irritable state of the alimentary tube, and it seldom fails to act as a mild aperient. In cases where I suspect a scrofulous taint to exist, in addition to the ipecacuanha, I also give iodine and iron in small doses. Such constitutional means I find to be quite sufficient.

As to local treatment, I first cause the hair to be cut short, but not shaved, and a poultice of bread and water, turnips, or linseed meal, to be applied to the scalp for four or five days, and changed every twelve hours until the "scruf" is completely got rid of and the morbid surface is placed in a favourable state for other applications. I continue the poulticing or plain water dressing, according to the mode recommended by Doctor Macartney of Dublin, until I think the active inflammatory state

of the scalp is removed. I then find that in most cases the following application will perfect the cure. I take equal parts of the liquor potassæ, olive oil, and plain water, and mix them well. I then apply a thin coating of this mixture to the affected part, with a shaving-brush, and cover it with a thin piece of lint, on which should be placed a cap of oiled silk. This dressing is removed every eight hours, taking care before each fresh application is made, to have the former one cleanly washed off with a sponge and warm water.

This mode of treatment is simple, easily put into practice, and not expensive, and will generally be found to effect a cure in a space of time usually extending from five weeks to two months. The healing of the scalp is not attended with any constitutional disturbance.

Of the eighteen cases which were under my care, twelve are perfectly cured. Two others are exceedingly obstinate, and the treatment of the other four I have just commenced.

The greatest obstacle in the treatment of these cases with which I had to contend, was the regulation of the diet, which, in consequence of the poverty of the patient, it was extremely difficult properly to manage.

Should any of your professional readers put this mode of treatment to the test of experiment in any public Institution, I shall feel much indebted to him if he will favour me with the result. I remain Sir, your obedient

J. L. M'Carthy, M.D.

Macroom, County Cork,
May 11, 1835.

POST-MORTEM EXAMINATION

OF HIS ROYAL HIGHNESS THE PRINCE DON AUGUSTUS OF PORTUGAL.

To the Editor of The Lancet.

Sir,—I trust that you will afford room in your valuable journal for the insertion of the following post-mortem examination,* which may prove one of interest to your subscribers.

The paper contains an abridged translation from the Government Portuguese bulletin, issued by Her Majesty, and it was by her request that the foreign physicians and surgeons were summoned in consultation, as she considered that her husband had been poisoned. I was the British physician in her service who was called in, and assisted to operate on the body of His Royal Highness.

I am, Sir, your obedient servant,

James Reynolds Taylor, M.D.,
Head Surgeon,
Queen's Own Irish Regiment, &c.
Lisbon, April 11, 1835.

The post-mortem examination of the corpse of His Royal Highness the Most Serene Prince Don Augustus, was held on the 29th of March, 1835, at the palace of *Necessidades* in the chamber in which lay the corpse:—present the Lords of the Bedchamber and other state officers, the physicians and surgeons of the royal household, and several Portuguese and foreign physicians and surgeons. The examination was commenced twenty-six hours after the demise. There was no vestige of external violence.

Cavity of the Abdomen.—A firm adhesion of the epiploon to the inferior and anterior part of the peritoneum, and to the anteterior part of the cæcum, and to the sides of the corresponding colon. The convex side of the liver adhered to the corresponding part of the diaphragm, and the concave part to the ascending and transverse colon.

The liver was of a pale colour, and the vesicla fellis was in a normal state. The thick extremity of the stomach adhered to the concave side of the diaphragm. The venous system of the abdomen was much gorged, the mesentery was a little injected and its glands were enlarged.

Interior of the Stomach.—This viscus contained a small quantity of ash-coloured liquid, without any smell. There was in the mucous membrane, a little way from the small curve, several blotches of a red colour, more or less vivid, the consequence of chronic inflammation; and the same were marked in the first portion of the duodenum, near the pyloric valve. The rest of the mucous membrane of the stomach and intestines was in a normal state.

Cavity of the Thorax.—The right lung was of a white ash colour, and crepatized in the superior and inferior lobes, but the middle lobe was completely hepatized; the superior and inferior were adhering to each other, and several layers of lymph were deposited on its surface; similar flocculi were observed on the superior part of the diaphragm, and a quantity of condensed albumen covering two inches was floating in about eight inches of a red liquid. On the inferior part of the left lung there were several flocculi of albumen, which adhered slightly. It was in a natural state, as was also the pleura. In this cavity there were found five ounces of a rose-coloured

* Abridged of some unnecessary formalities.—Ed. L.

fluid. The heart was of a natural size, but was somewhat pale and soft; about half-an-inch of its apex adhered to the pericardium. Two small polypi were found in the left auricle; the rest was natural.

Anterior Cervical Region.—The thyroid gland was very much enlarged, weighed three ounces, and contained an encysted tumour in the right lobe, which was found to contain grumous liquid of the colour of the dross of red wine. There was also a concretion of bony matter an inch long, varying in thickness from two to four lines.

Posterior Fauces.—The glandulæ amygdalæ were swelled and slightly ulcerated, and of a dark colour in some parts. The base of the tongue was covered with a false ashy coat, soft, with a little adhesion, fragments of which were easily separated with the back of the scalpel. The epiglottis was expanded, red, and a little hard, a false membrane having formed at this part, which entered the larynx, and adhered to its interior, and continued extending itself into the small branches of the bronchia. This membrane was of more consistence in the trachea, white, adhesive, and easily separated from the mucous membrane of the air passage, which was spotted with red dots, some of a deep colour; this alteration in the windpipe was likewise examined with the greatest attention by the Minister of the Home Department, the household officers, and the aides-de-camp present. The cranium was not exposed, in consequence of sufficient cause having been discovered for the death, and no symptoms having appeared of an affection of the brain.

Contents of the Stomach.—A commission was appointed to examine the liquid contained in the stomach, which had been sealed up, and was conveyed to the apothecary's quarters in the palace, where it was analysed. The usual chemical tests having been applied, it was found that it did not differ from the liquid matter usually found in the stomach of corpses.

(Signed by the titled authorities present, the native physicians and surgeons, and by William Martin, M.D., H.B.M. ship *Hastings*, James Reynolds Taylor, M.D., William P. Murphy, surgeon, and Reeves Gill, surgeon.)

In consequence of the diseases found in the different organs, the undersigned professors of medicine and surgery do not hesitate one moment in unanimously stating on their honour that His Royal Highness suffered during his life from different inflammatory affections in the mucous and serous membranes, and that in the end His Royal Highness sank under the violence of angina crupal.

(Signed by the medical gentlemen, including the above British physicians and surgeons.)

ORGANS OF SPEECH.

To the Editor of THE LANCET.

SIR,—Being engaged in an inquiry necessarily connected with questions concerning the organs of speech, I take the liberty of transmitting the following observations and remarks.

The *uvula* is usually classed among the organs of enunciation; but the *soft palate*, as *an active organ*, is not. Some months ago a gentleman called upon me for advice respecting the articulation of his friend, who, he said, could not pronounce *l*, and who had some defect in his organs of speech. It very soon struck me that the utterance of the individual before me was an instance of the same deficiency in articulation. Having acknowledged that he himself was the very person whom he had described, he permitted me to look into his mouth. I then discovered that the organs of this gentleman seemed to be defective only in the *uvula*, which organ he had not. It occasioned my astonishment to hear him articulate all the mute consonants with considerable clearness. With respect to *l*, it did not occur to me then, nor does it now, that the *non existence* of a *uvula* had anything to do with his defective articulation.

Another case was lately presented to me at Brighton, in a young gentleman residing at Cavendish-place. The youth had *no* soft palate; but, situate—where possibly it could be of no use—at the back part of the *hard* palate, of the usual shape and size, was suspended the *uvula*. This young person could articulate *p*, *t*, *k*, &c., pretty well,—not so distinctly, however, as the former individual. A third case is in Master G——, a young gentleman now resident at Brook-green. There is deficiency both in respect to the *uvula* and to part of the *soft palate*. This youth has the power, by means probably of some action of the remaining part of the soft palate, to articulate the mute consonants with tolerable ease.

I am perfectly aware that these are instances of cases where the organs are defective, and that while they tend to show, under peculiar circumstances, the substitutions of nature, they do not enable me

to decide, when the organs are perfectly formed, which is that which closes the nasal passage during the utterance of the mute consonants. In the "Elements of Speech, by John Herries, A.M.," published by Dilly, 1773, we read, "At the hinder part of the palate, immediately before the nasal passage, is suspended a small fleshy membrane called the *uvula*. Its chief object is to prevent the breath from escaping through the nostrils in the pronunciation of the mutes." Notwithstanding the declaration which the above passage contains, I should feel greater satisfaction were I to be favoured with some opinions on the subject. In instances where the organs are perfect, what is the name of the organ in question, viz., the organ which closes the nasal passage during or at the pronunciation of *g* in the word *angle*, *k* in *tak'n*, or *t* in cert'n. Is it the *uvula* or the soft palate?

In cases where there is deformity in the upper lip, or where the lip is divided, and where there is a total deficiency in the hard and soft palate, and consequently in the *uvula*, persons are unable to articulate the mutes, and I am strongly inclined to suspect that such individuals never hesitate at letters in their speech; they never stutter. And, possibly, Mr. Editor, you will permit me to inquire, also, through the medium of your valuable pages, if an instance of *psellismus* or *stuttering* is known to have existed when the *lip*, the hard and soft palate, and uvula, are defective, or when there are not natural means of closing the nasal passage. I am, Sir, your humble servant,

V.

May 20, 1835.

ABSTRACT OF THE EVIDENCE OF

MEMBERS OF THE ROYAL COLLEGE OF SURGEONS

TAKEN BEFORE THE

PARLIAMENTARY MEDICAL COMMITTEE IN 1834.

In another part of the present number of THE LANCET (page 296) will be found a notice of that portion (Part 2) of the Report from the Select Committee on Medical Education which contains the Minutes of Evidence, published (by order of the House of Commons) under the head of "Royal College of Surgeons in London," of which part the following abstract forms the first paper of an intended series. The principles on which the abstract has been made will there be found sufficiently described to render any introductory remark unnecessary here. We therefore simply state that Mr. Guthrie was the first witness examined in this division of the proceedings, and at once proceed with the analysis, placing a summary of its contents immediately at the head of the abstract.

Mr. George James Guthrie, called in, and Examined, April 28, 1834.

HENRY WARBURTON, Esq., in the Chair.

Titles of the Witness, 1.—The Council and Court of Examiners of the College, and Qualifications for their Election, 2, 8.—Disqualification of Surgeons in general Practice, 2.—Distressing Nature of the Choice by Self-election; Anxiety of the Council to improve the Mode of Election; Plans of Change considered and rejected, 2, &c.—Their Opinion that the existing Plan is perfect, 7.—Number of "Pure" Surgeons in England, and of Members of the College who also practise "in any other way they please," 3.—Pledge once given by the Council that they would never make any Distinction amongst the Members of the College, 4.—Opinion of Witness that if the Election of the Council devolved on Surgeons living in London, he (Witness) would have had no chance of becoming a Member of the Council, 5. His Objection, therefore, to that Mode of Election, 5.—Mode of Effecting an Impossibility in Council and Hospital Elections, 6.—How to become "Eligible" for Election into the Council, 6.—Eligible Gentlemen whose Anatomy has become Rusty, 6.—Existence of an "exceedingly useful Minority" in the Council, 7.—The "good which has been done in the College," 7.—If a Man "like the Witness" had to Canvass, 7.—How the Profession is "bad enough already," and yet is a "peaceful, quiet, and scientific body," 7.—How the Parliamentary Committee may delight the Council, 7.—Why Surgeons, who have two Masters, cannot belong to the Council, 8.—Surgeons who Practise Medicine are presumed to be ill qualified in Anatomy and Surgery, and therefore are excluded from the Council, 9.—Acknowledgment that the Council themselves have "a great deal to learn on every point of Anatomy and Surgery," 9.—Statement, immediately afterwards, that "two or three years attention to Surgery only," will remove all objection to Elections into the Council, 9.—What a Practitioner does the moment the public "appreciates him," 10.—Admission of Witness that many Practitioners are eminent Surgeons, 11.—Witness's professed ignorance of Pharmacy, 12.—Poverty drives Surgeons to Practise Pharmacy and Midwifery, 12, 21.—The Administration of Medicine to Soldiers, Sailors, and East Indians, no disqualification for Election into the Council, 16.—Professional Absenteeism, 17.—Witness sometimes sleeps from home, 18.—Many Members of the College not highly Moral Men, 19.—Witness's "little improvements" in Surgery, 20.—No scientific Acquirements required by the Public in Midwives, 21.—Why Midwives are rejected

by the Council, 21.—Poverty qualifies Men to examine Candidates for Surgical Diploma, 21.—Powers respecting Allanson, Hey, and Wm. Hunter, 13, 14, 22.—What the Council value themselves upon, 23.—Witness knows no good Accoucheur who is a good Surgeon, 24.—When the Council will meet Surgeons and Accoucheurs half way, 24.—The Council grant the Diploma for "the least possible quantum of Education," 25.—Elections into the Council for Life, 26.—Aged Examiners, 27.—Mode of Electing new Councillors, 27.—Witness's horror of the Ballot, 28.

1. The witness first stated, in answer to the Chairman, that he was President of the Royal College of Surgeons of London, Deputy Inspector General of Army Hospitals, Surgeon to the Westminster Hospital and to the Royal Westminster Ophthalmic Hospital, M.D. of the University of Aberdeen, Author of several Works on Surgery, and Lecturer on Surgery in Windmill-street, having served in the Peninsular campaigns from the first battle to the last, as surgeon and as deputy inspector-general. Ten years ago he became a member of the Council of the College of Surgeons.

2. Having given some details relative to his early education, the Chairman proceeded to inquire into the constitution and customs of the College of Surgeons in London, and obtained the following evidence:—The Council of the College consists of twenty-one members, inclusive of the president and vice-presidents, and out of those twenty-one members the ten examiners are chosen. No man can be president or vice-president unless he belongs to the Court of Examiners. The Examiners are chosen from the Council; they are usually the ten senior members of the Council, and the office of president and vice-presidents is taken in turns by the ten Examiners, according to their seniority, &c. The Council is chosen from the members generally, or the commonalty, as it was anciently termed, and the circumstances that usually guide the choice of the Council in electing surgeons to fill up vacancies in their own body are these: If any member (if, for instance, the King's sergeant-surgeon) should happen to be an apothecary, the Council would not admit him. The King was once pleased to make Sir David Dundas (his apothecary) his sergeant-surgeon, and consequently the Council refused to admit him; and it was not until some years afterwards, when the charter was granted, and he had *ceased to be an apothecary*, that he was allowed to take rank in the College as sergeant-surgeon. The Council is selected from those surgeons who practise surgery only. A gentleman is not admissible who practises as an apothecary, and it is contrary to the by-laws to elect into the Council a gentleman who practises as a midwife. "When Sir David Dundas (said the witness), although sergeant-surgeon, was excluded from the Council, on the ground of his practising in pharmacy, his late Majesty George the Fourth *highly approved* of the proceeding, and was pleased in consequence to make certain alterations in the charter, to prevent the occurrence of such a circumstance again, so that the King's sergeant-surgeon, or the surgeon-general to the forces, should not succeed by right of his station to the office of Examiner, unless he was elected upon the Council; giving therefore to the Council the power of excluding him from the Court of Examiners, by not electing him upon the Council. *It was a very remarkable and gracious act of his late Majesty*, and one of those for which the College is *most humbly indebted to him*. The members of the College have no voice in the election of the Council. The old existing members of the Council elect a new one. That is a duty *which distresses us all exceedingly*; and *if it could be shown that it could be done better for the public service*, there is not one of the Council that would not be *delighted that another mode should be found of doing it*; but I shall take an opportunity of showing, in due time, that that *cannot be done with advantage*. Several of us, who have *very much the interest of the College and of the public at heart*, have been anxious to devise a different mode of electing the members of the Council, and we have considered deeply every one of the different methods which has at various times been recommended. It has been proposed, that the whole of those gentlemen who practise surgery only, and who may amount probably to something near 200, should have this power vested in them. And in order to show them to be men of great acquirements, they were to undergo a second examination, stricter in its nature than the first, and so strict, in fact, that there are very few, except those who have been highly educated, that would wish to meet it. Now I was one who supported this measure at first, but I soon found that it would lead to several very great inconveniences. In the first place, I do not believe that it would at all satisfy the public. As president of the College, *I have the honour now to represent* 8000 *members*; and I have great satisfaction in saying, that *there is not one stated grievance at this moment before the College to redress*; and I do not believe that the 7800 would be at all *better satisfied* than they are at the present moment, by having that power

vested in the 200 who practise surgery only, or in any definite number of members. On the contrary, I think the great body would be *less satisfied* than *they are with the present mode of proceeding.*"

3. The Chairman then asked the witness, Do you mean that there are 200 pure surgeons scattered over the whole of England and Wales?—The witness replied, I object to the term *pure* surgeon. There are, I believe, 200 surgeons who practise surgery *only* in the whole country, and not quite so many in London. The remainder of the 8000 members of the College practise as surgeon-apothecaries, *and in any other way they please.*

4. The witness then confessed that the disqualification of practitioners in pharmacy or midwifery, to become members of the Council, arises out of the by-laws and not out of the charter; and he stated that there is no passage whatever in the charter which recognises any distinction in the commonalty between those who practise surgery coupled with midwifery or pharmacy, and those who practise surgery only; and that the College, when it obtained its charter as a Royal College, did give *an indirect pledge*, that it would NOT MAKE A DISTINCTION AMONG ITS MEMBERS. This pledge was not given at a meeting of the commonalty at which the Council explained to the members assembled the course they were about to pursue, but it took place by publications among the parties, when the charter was opposed by part of the general body, and counsel were heard, on both sides, before the attorney and solicitor-general.

5. The chairman, on pressing the witness for his other objections to constituting such an elective body of 200 as he had alluded to, said that it would not be so much for the *public advantage* as the present mode, adding by way of illustration, I do not believe, for instance, that *a person like myself* would ten years ago have had any chance of becoming a member of the Council, if he had had to be selected by the body of what are *called* surgeons living in London. An arrangement of this kind would render a certain degree of *coarse* necessary. It would require certain arrangements of ballot; and would occasion a great many *other serious difficulties* which led us to believe, that it would in no way be satisfactory to the body generally, and in no manner so *advantageous to the public.*

6. *The Chairman.* When you say "*us*," whom do you mean?—*Witness. Two or three gentlemen* who have investigated this matter. The proposition for *a second examination* has been put to the vote before the Council within the last two years. Of course there was to be a fee for that examination, in order to prevent persons being *unnecessarily troublesome.* If this had been carried into execution, it would have led to the formation of a *closer* body in the College than is *said* at present to exist, and to a *closer* mode of *election into hospitals*: consequently, it would have led to the exclusion of a great number of *respectable persons*, who *suppose* themselves qualified for such situations. On a ballot taking place, it was lost. Another great ground of my objection was this: that if the second examination were as strict as I myself first intended, it would have prevented many men from coming at all. If a man has been an apothecary or a man-midwife, and chooses at any time to *cease* to occupy those stations, and to confine his practice to surgery, he becomes *eligible for election into our council.* It would have been almost impossible for any gentleman aged 35 years, returning to his native land after ten or fifteen years of service, unless he should have been closely engaged in minute anatomy during a great part of that period, to have *ventured before us* for that examination: and, consequently, I felt that it would *throw the Council entirely into the hands of the hospital surgeons and the hospital teachers*; and that would be *doing a number of other persons a great injustice*: for it is one thing to undergo an examination in minute anatomy, when fresh from the schools, at twenty-five years of age; and another to meet it at thirty-five or forty, after an absence of several years. In addition, it was proposed out of this body to form a society to read papers and publish transactions; and that society must necessarily have included only those *peculiar* persons. For it is nearly impossible to have a *peculiar* body, without giving to the members of that body *peculiar privileges*; and, consequently, it is *for the advantage of the general body that nothing of the kind shall exist*, and that every man who is *fairly qualified* to take a place in the Council, should be open to election: and I will further venture to affirm, that very few instances can be adduced in which the exclusion of an individual, having apparently fair pretensions, has not been *for the advantage of the public and the advancement of surgical science.*

7. Speaking of other modes of electing the Council, the witness objects to them all in favour of the existing plan, in the following terms:—At the present moment we have several upon the Council who are neither hospital surgeons, nor teachers of anatomy or surgery, but men who have rendered the most important benefits to the public at large upon many occasions, and who form an *exceedingly useful minority.*

I have consulted different gentlemen of what is called "*the Radical persuasion*" upon those points, and I have not found any two of them agreed in the same proposition. Some wish to have 300, some 200, and some 100 electors; and some (very few indeed) wish to have the whole body in London for electors. Now, in regard to the whole body electing, all the objections I have hitherto stated, hold good against this plan. If there were such an election to-morrow, in all probability the youngest surgeon of St. Thomas's, or Guy's, or St. Bartholomew's hospital, would succeed to the vacancy, in preference to almost any one of the ablest men at the west end of the town; unless he happened to be a particularly prominent person. There are always two parties: one is the movement party, who work, and go to vote for their candidate; the other is the quiet party who do nothing. And as the younger candidate would have educated nine probably out of ten who vote, there would be very little doubt that he would be elected to the office. I have no hesitation in expressing my opinion that a great deal of *the good* which has been done in the College of Surgeons in the last ten years, might not have taken place *if it had not been composed in the way it now is.* The hospital surgeons and teachers would be the parties elected, *more so than they are now.* There is another great objection, namely, that if 2000 men are to be canvassed in the great district of London, it would require that the medical profession should *cease to be a peaceful profession.* We must become a canvassing body, a placarding body, a very quarrelsome body. If a man LIKE MYSELF were to be under the necessity of canvassing 2000 men all over London, I would just as soon canvass to be a Member of Parliament, or any thing else in the county. The result would be, that we should be frequently at daggers drawn. *We are bad enough already;* but with a frequent repetition of these contests, *we should not be able to meet even in the streets in comfort,* much less in consultation. I am *very desirous that nothing of the kind may take place;* but that we may be *left* a peaceful, quiet, and scientific body. I beg to say that, believing the present mode of election to be the *fairest* and the *best* which under all circumstances can take place, I am however desirous that, as a compensation for the *loss of the elective privilege,* all the meetings of the Council, instead of being close, should be open to every member of the commonalty; that would be a much greater *compensation* to them, than giving them the mere right of election. So painful and disagreeable a duty is that of electing, that I believe the Council will be delighted if this Committee can point out any means by which they may get rid of it, and which may be found equally advantageous to the public and to the science of surgery.

8. Do you consider the by-law advantageous which excludes from the Council persons practising pharmacy?—Yes, I do. It is an ancient by-law. It was believed that no person could heartily serve two masters; that he could not follow *two different professions;* and that *if* he did, he would not be well qualified for the higher offices that are desired from a surgeon. When we elect a man into the Council of the College of Surgeons, we consider a *great number of circumstances.* In the first place, his *professional character*: that he must be a man of *reasonable* attainments as an anatomist; that he must have *considerable* qualifications as a surgeon: that he must not be a bankrupt, or insolvent. That he must be a man of *good moral character,* one against whom no person of the profession can bring any special and valid reasons, affecting him in any way whatsoever. He must be a man qualified, in his turn, to take the place of an examiner, and, consequently, a man *well versed* in anatomy and in the practice of surgery, as followed throughout Europe; and as far as we can obtain it, he should be a gentleman of as great acquirements as we can *reasonably* expect from persons in our situation of life. If a person, after admission into the Council, practises midwifery or pharmacy, the by-law declaring him liable to removal would be immediately carried into effect, supposing that he does it *for money.* It would not apply, of course, to a person who does it as a matter of *charity,* or of *humanity,* upon a particular occasion.

9. Are you of opinion that practice in pharmacy is a professional practice of that kind which ought to exclude the practitioner from being a member of your Council?—We exclude the practitioner in pharmacy, *because a seat in the Council requires that a person should be* WELL QUALIFIED *in anatomy,* and HIGHLY QUALIFIED *in surgery;* and in order to be highly qualified in surgery, a man should devote his whole attention to that branch; and you will find amongst us all, from the senior to the junior, that, after forty or fifty years of labour, we declare ourselves *unacquainted with the whole of the subject*; that we have still *a great deal to learn upon every point.* We presume that gentlemen practising pharmacy do not devote themselves in that manner to the study of surgery; we believe that they do not spend a great part of their days, as we are frequently obliged to do, in our hospitals and

in our dissecting-rooms, making those necessary investigations. We believe, on the contrary, that they are engaged in a different line of practice; that they are more addicted to the study of physic; that they are more engaged as practitioners in medicine; and that they do not, generally speaking, seek to qualify themselves in the higher branches of anatomy and surgery. Not that those gentlemen are not perfectly *competent to do so*, but that the line of practice which, at an early period of life, they adopt, precludes the possibility of their making those investigations which are necessary for the advancement of surgical science. In order to be a surgeon alone, a man cannot set himself down at twenty-one or twenty-two, and say, "I am a practitioner in surgery, and you may come and employ me." He may do so, but *nobody will come*; and he may probably find, under the best auspices and in the best situation, that it is not until after thirty that he will be able to acquire even a moderate competency, or even the means of living; whereas when a gentleman at twenty-two sets himself down to practise pharmacy, he very soon finds, if he be an able man, that he can obtain, not only a competency, but that he may very soon obtain considerable comfort and eminence in that branch of the profession. But this can scarcely be done but by his giving up that attention to the study of anatomy and surgery which will qualify him for the office of a member of the court of examiners. Now I must explain, that when we elect a man upon the Council, we always take him in rotation into the Court of Examiners. Formerly they did not so, and it was so painful and so distressing a feeling when we were obliged to leave a man out of the court of examiners, because we thought he might not be qualified to conduct examinations properly, that the Council came to an understanding, that they would admit no one into the Council whom they did not consider qualified to become an examiner; and that is an additional reason why the gentlemen who practise pharmacy are excluded from the Council. Yet if a gentleman chooses to *give up his practice in pharmacy*, and devote himself for EVEN TWO OR THREE YEARS to surgery ONLY, there is THEN NO OBJECTION MADE TO HIS COMING UPON THE COUNCIL; and we have elected gentlemen under those circumstances.

10. Have not many general practitioners been excellent anatomists and surgeons, and made great improvements in surgery?—That is a question that involves *a great variation in the reply*. If a man has a private fortune, and chooses to call himself a practitioner of pharmacy, but at the same time devotes himself to anatomy, he may become as great an anatomist as any man in the country. If he devotes himself to the study of one branch of surgery in addition to his pharmacy, he may be a great improver in a particular branch of surgery: but the moment he is so, the moment the public *appreciate him*, he usually *abandons his pharmacy*, and *becomes a surgeon*. There is Mr. Amesbury, who has distinguished himself in the treatment of fractures. When he acquired a certain degree of reputation, he ceased to be a practitioner in pharmacy, and, I am sure, very much, at first, to his own disadvantage; I believe he got more money when he was a general practitioner, than he did for some time after he became a surgeon only.

11. Are there not *very many* general practitioners, who have proved, by their making great improvements in surgery, that their attention is *not* so taken up with their practice in pharmacy, as to prevent them from duly studying the art and science of surgery?—There are many; and all that we require of them is, that they shall cease to follow that pursuit which is *disadvantageous to their future improvement*. And because we find one eminent anatomical surgeon in one hundred gentlemen practising pharmacy, it is no reason for considering the other ninety-nine to be equally so.

12. Is not the *private practice* of eminent surgeons in London likely to engage *as much* of their time, as the practice of many *general practitioners* in this town?—Yes; but the one is engaged in *surgery*, and the other is engaged in *pharmacy*. I do not profess to be a good practitioner in pharmacy. I studied in an apothecary's shop for a year; but I do not presume to understand pharmacy as well as a gentleman who is practising it every day, and all his life.

13. Suppose Mr. Allanson of Liverpool were alive, who was a general practitioner, and introduced a great improvement in the mode of amputating: do you think that if he were in London, and a general practitioner, his practice in pharmacy should be a disqualification for his being introduced into the Council?—I should not say that a single suggestion in one branch of surgery would make a man eminent, by any means. A man must understand his profession in every branch, and he must be prominent in several of them, before he can be what is called a good surgeon.

14. Was not Mr. Hey, of Leeds, a good surgeon, a general practitioner, and attached to the infirmary at Leeds?—Yes.

15. As far as a knowledge of surgery goes, on the part of such gentlemen, do not you

think they proved by the improvements they introduced into practice, that they were sufficiently good surgeons to become members of the Council?—That is a matter of *opinion*. Besides, Mr. Hey of Leeds was very little of an apothecary. He had always persons with him who practised that branch of the profession, and latterly, I believe, he practised almost solely as a surgeon; and the greater part of the country surgeons are abandoning that portion of the practice. At Worcester, I believe, there is scarcely a surgeon who practises pharmacy. At Bristol, Liverpool, Birmingham, and Manchester, they do not all practise as general practitioners. It is only when a man *cannot help it*, when he cannot get enough practice, and enough money, by the *one* mode of proceeding, that he *adopts both*. It is HIS POVERTY, *and not his will consents*.

16. Then there are 200 out of 8000, who are qualified according to the by-law for being admitted into the Council?—No, because all the navy, all the army, and all the India surgeons, are *not looked upon as being practitioners in pharmacy*; and therefore all those men are *eligible* to the Council, and they never would have a chance if the election were conducted in any other way. Those who are engaged in those services, although they continue at the time in the service, are still eligible to be admitted into the Council of the College, provided they are living in London, and are not likely to go abroad.

17. Are not they always liable to go abroad, so long as they hold their commission?—If a gentleman hold the rank of a staff-surgeon or of a deputy inspector, some one might say to him, "Sir, you are a gentleman of great eminence and talent, and it may be your turn to be elected into our Council very soon. Will you do me the favour to tell me, whether you mean to serve abroad again?" If he said, "No, I do not; I am going to live in London;" we should then say, "If his Majesty were to call for your services, should you go?" If he answered, he should, we should not elect him. If he said, "No, I should resign my commission," he would be eligible, and in all probability would be elected. There is one instance on record, in which a particular exemption was made in favour of a gentleman, the late Mr. Morell, of the Westminster Hospital. He was then serving in Spain. The Council wrote to him to ask, whether he should remain there, or return to England if he were elected. He said, he should not return; and he was passed by, but he was allowed to take his turn again; but it was declared that, in future, such exceptions should not be made. All of the Council are resident in London, except ancient members, who live, for the sake of fresh air, at Brixton and Clapham. Sir William Blizard and Mr. Lynn are the only two men, I am aware of, who live regularly out of town. I *take the liberty* myself in the summer of sleeping out of town for a month or two.

18. What proportion of the whole College are resident in London?—I think from about 1600 to 2000, and there are 3000 members of the College in the army and navy, and abroad. But every person who practises surgery in England is *not a member of the College of Surgeons*.

19. You stated that a man should be of good moral character, to entitle him to be of the Council. Have you any doubt that out of the large number of members of your College who practise pharmacy, there are very many gentlemen of high moral character, quite fit in that respect to be members of the Council?—The *greater part* of them I would say; as many in proportion as in any other rank of life.

20. Then your objection to admit in the Council practitioners in pharmacy, is reduced to this: that to possess that knowledge of surgery which befits a member of the Council, unremitting application to the study of surgery is requisite?—He must devote his *whole time to it night and day*, and at the end of thirty-six years of labour, *I take the liberty of saying, that I am at this moment engaged in making*, I HOPE, what may TURN OUT TO BE some LITTLE IMPROVEMENTS in it; and I am as ready and *as willing* to learn now as I was *thirty-six years ago*, and I feel it to be as necessary. *All the Council are of this opinion*.

21. What is the substantial reason why you think practitioners in midwifery should be excluded from admission into the Council?—For the same reason. A practitioner in midwifery is *a gentleman who makes his election at a particular period of time*. He says, when he commences the profession, "If I practise surgery alone, I shall be thirty years of age before I get 30*l.* a year." Then seeing the prospect in that branch of the profession is so bad, he says, "What else am I to do? I cannot *starve*; I will be a practitioner in midwifery." He knows that the public demand for practitioners in midwifery is very considerably greater than for practitioners in surgery; that the same circumstances are not required to enable him to get into practice in midwifery as in surgery; because Mrs. Such-a-one will send for *anybody* as a man-midwife, who is known to be of a *respectable character*. But persons do not go to *a surgeon* upon such an understanding. They usually come to him only in consequence of his

great public reputation, on *extensive private recommendation*, or by the recommendation of the general practitioner in attendance upon the family. Consequently, a gentleman can get himself into an excellent practice as a midwife at a very early period of life, and it is one of the most lucrative branches of the profession in London. *Another reason* why a gentleman engaged in pharmacy ought not to be a member of the Council of the College of Surgeons is, that he is generally an accoucheur also, and he is so much engaged in that addition to his pharmacy, that he has not possibly time to devote to surgery. It is the same with the man-midwife; he has no *time* to devote to surgery; if he *has time*, he has *no means* of improving his knowledge in it. No set of governors will elect him to an hospital as a surgeon, if he is known to be an accoucheur; and it is of no use to say he is a surgeon, *even to the ladies who employ him*. They have not the *slightest opinion of him in surgery*, except in connexion with midwifery; and if he says to the gentleman whose wife he is attending, that he is *a practitioner in general surgery*, the gentleman *pays little attention to it*. Consequently, he has neither practice as a surgeon in an hospital, nor in private life. I do not mean to say that those gentlemen are not thoroughly qualified for many of the *minor* branches of surgery. It would be an *undue preference* to elect midwives as well as surgeons on the Council; BECAUSE he takes, at his entrance into life, *that branch which leads him to eminence and to fortune almost immediately*; whilst the *other* man, labouring night and day, finds himself at thirty-five a poor man; but he also finds himself, through his labour, and *from his having selected poverty instead of riches*, a man *qualified to take charge of a public hospital*, and to become an examiner of young men in surgery. But I would go further, and say that we would willingly have received amongst us any *reasonable* number, say two or three gentlemen, who were surgeons eminent in midwifery; but if we had taken *one* into the Council, we must have taken *all in their turn*. We felt that that would be *an inconvenience and a hardship*. But supposing that we had elected them upon the Council for the sake of their knowledge in midwifery, and put them on the Court of Examiners for the sake of their examinations in midwifery, they never would have been satisfied with remaining *at the bottom of the Court of Examiners*. They would have sought, each in his turn, to become a president of the College; and with *all possible respect* for this class of gentlemen, I must say that I should be exceedingly sorry to see the first accoucheur in this town, president. I do not think it would lead to the advancement of the science.

22. You are aware that *Dr. Wm. Hunter* was *an accoucheur*, and was the founder of the *first great anatomical school in London*. Do you think that if he were alive, and were practising midwifery, he would not be a person highly calculated to do *honour* to the Council of the College?—He was no surgeon at all, and he knew little about it. He was an admirable anatomist, and a great accoucheur; but we want a man fit to be an examiner in surgery, and not an accoucheur.

23. There is a gentleman who has lately performed with success the very remarkable and hazardous operation of tapping the skull of a child for hydrocephalus. Do you not think that the making such an improvement entitles the improver to the honour of being elected into the Council of the College?—He is a man *highly respectable*, and an *eminent accoucheur*, certainly. But if any candidate for the honour of a seat in the Council were to set up in my presence, being president, a claim to that honour, founded on an improvement of that kind, I should say to him, "Sir, you forget that surgery is *something more than a single suggestion*. There are many of us who could produce *half-a-dozen instances*, each of them as good; but we do not value ourselves upon single suggestions of that kind; it is upon a due pre-eminence in the great range of surgery generally, that a man must depend to OBTAIN OUR FAVOURS."

23. Does not a knowledge of the practice of midwifery involve a knowledge of, and skill in performing, very many dangerous surgical operations; the excision of the neck of the uterus for instance?—Certainly.

24. Suppose a person, besides being a good midwife, has also by his general practice proved he is a good surgeon also. Why should his practising as a midwife disqualify him from being one of the Council of the College?—I have *not the honour of knowing such a person in London*. The College presumes the existence of such a person to be impossible, because we have not seen such an individual. Whenever persons shall be found who are excellent surgeons, and at the same time practise midwifery or pharmacy, I think, if he was a very prominent man, we should be exceedingly desirous to remove the disqualification; and perhaps he would *meet us half way*, by giving up the objectionable branch of practice; and then we would meet *him half way*. We exclude from the Council every man who is a branch practitioner altogether. *Occlusis*

and aurists, and branch-practitioners of that description, are also excluded.

25. What qualifications are required of candidates for the diploma of the College?—I must say this, that the College name *the least possible quantum of education*, from this circumstance, that persons have chosen to present themselves for examination with scarcely any education at all, and, when refused, said it was *very unfair* and *very harsh* to refuse them an examination without having stated what was required of them as a qualification. Under these circumstances, it became necessary to name *the lowest quantum of education that we could receive.*

26. Do not persons once elected members of the Council, remain so for life?—They do, except in case of misconduct: that is a point which *requires alteration.*

26. The examiners being the *seniors* of the Council, and remaining so *for life*, does it not follow that the examiners are persons, for the most part, in *a very advanced period of life?*—No, we have but two gentlemen at an advanced period of life: Sir William Blizard and Mr. Lynn. The next in succession is Sir Astley Cooper, who told *us* the other day that he was 65; and the others are all junior. But it is desirable to exclude from the Court of Examiners persons of very advanced age, and to appoint persons in the prime and vigour of life. We have often *thought of that*, and do now think, I believe, many of us, and MYSELF amongst them, that no man should remain in the Court of Examiners after he had completed his 75th year; and I have no hesitation in saying that I think this alteration would have taken place, if it were not for the *great personal respect* we have for the two gentlemen to whom I have alluded. The first on the list for election is the Professor of Surgery at King's College; and I suppose he is about 40, perhaps a little more. By "the first upon the list" I mean, when one of the members of the Council dies or resigns, the Council meet upon a certain day, when the *elderly gentlemen* used (formerly) to address the Council upon the subject of the *high moral character* and the *great attainments* which the candidates ought to possess: but we have *latterly considered that rather a matter of supererogation*, and have not been so formal about it as heretofore. The chronological list is then read, beginning with the name of the gentleman last elected. *Many* names are usually called over, until at last we come to the name of a gentleman who *seems to be a proper person.* Any member of the Council then says, "I propose Mr. So-and-so." We do not now require that the proposition should even be seconded; and we go on reading the list, till we have six names before us. That being done, the president announces that *the business of the day is over*, and he fixes another day for the election. And then we begin once more with the chronological list, in order to PREVENT A MISTAKE, and to give gentlemen an opportunity to CORRECT THEIR OPINIONS: that is, they may add other names to the list, if they please, even at the last moment, provided it stands on the chronological list before the first one named on the former occasion. As soon as any member proposes a name, and the proposition is seconded, we go to ballot; but if any gentleman opposes, then he gets up and says that he opposes upon such and such grounds. We then proceed to the ballot. If the ballot is unfavourable, we proceed to read the chronological list again, until one is elected. When a vacancy occurs, we commence at the name of the gentleman last elected: so that we never resume again the consideration of the names of the members *once passed over*, who were senior to the gentleman last elected.

28. Ought the meetings at which the election of councillors takes place to be *open?*—Decidedly not; because it is a personal question. I have *a horror of a ballot.* I have so great a horror of it that I have generally put a paper in upon my ball that everybody may see it.

Here terminate the inquiries relative to the constitution and government of the College. The questions next directed to the witness related to the regulation required to be observed by candidates for the diploma of the College.

Tables and Diagrams illustrative of Chemistry and Pharmacy. By J. MURRAY, M.D., Edinburgh. Carfrae and Son, 1835, pp. 71.

BESIDES the diagrams illustrative of chemical decompositions, this work contains tables of simple substances; the date of their discovery; their atomic weights and their symbols; and a table of compound substances, of salts, of vegetable principles, of the specific gravities of gases and vapours, as well as their composition by volume; followed by an arrangement of isomeric and isomorphous bodies. Medical students will find it a useful epitome of such of the principal facts in chemistry as can be expressed by numbers, or explained by figures; and a good work of reference in practical pharmacy.

The chemical symbols first proposed by Berzelius have been adopted with slight modifications throughout Europe. The first letter of the Latinized name is generally employed; thus *S* stands for sulphur, *H* for hydrogen, *O* for oxygen. But where two or several simple bodies have the same initials, another letter is added; *C*, for instance, is appropriated to carbon, *Cl* to chlorine, *Ca* to calcium, *Cb* to cobalt, *Cr* to chrome, *Ce* to cerium, *Cd* to cadmium, *Co* to columbium, and *Cu* to copper. Beudant ineffectually endeavoured to change this nomenclature, by substituting the initial letters of the French names,—a piece of national vanity which, if imitated by the other nations of the world, would make these symbols of chemical science (though, like those of algebra, should be universal) incomprehensible, and of purely local value.

The number of atoms is indicated by figures. A figure placed to the left multiplies all the atoms extending to the sign +, or to the end of the formula. A small figure placed to the right, like an algebraic exponent, only multiplies the atom to the left; $S^2 O^5$ for instance, indicates 2 atoms of sulphur, and 5 of oxygen, or hyposulphuric acid; but $2S^2 O^5$ indicates 2 atoms of the same substance. Ammonia is written by the Continental chemists H^3N; but Mr. Murray remarks, that as this kind of formula is opposed to the usual algebraic notation (converting what should be a coefficient into an exponent), British chemists prefer placing the number which indicates the atoms immediately before the symbol; they write 3HN.

There is an inconvenience in employing symbols differently in two sciences, and we are aware that the question of chemical signs has been agitated in the British Association, but no definitive decision was come to, and perhaps in the present state of chemistry, algebraic formulæ are not applicable, or would be cumbersome. Mr. Murray only avoids one part of the difficulty; for he writes S H (sulphuretted hydrogen) which is to be read S + H; now taken as algebraic signs S H should be read S × H. The table Mr. Murray has given appears to have lost something in clearness, without having gained much in precision, by the changes proposed; and on the whole, it does not appear that British chemists would yet be justified in deviating from the practice of the Swedish, German, and French chemists. In continuing this brief sketch of chemical formulæ, we shall therefore adhere to the original suggestions of Berzelius.

In cases where 2 atoms of a radical combine with 1, 3, or 5 atoms of oxygen, the double atom is distinguished by a stroke drawn across the lower part of the letter. *P* indicates a simple atom, *P* (crossed) a double atom of phosphorus; *As* a single, *As* (crossed) a double atom of arsenic.

A compound atom of the first order may be expressed in the following manner: Cu O + S O^3 indicates the sulph. of the oxide of copper, and *Fe* (crossed) O^3 + 3 S O^3 marks the sulphate of the peroxide of iron. But this method of expressing a double salt—a compound atom of the second order—would be tedious and confusing, and as these compound atoms are generally only salts of oxygen or sulphur, the atoms of oxygen are indicated by points over the sign of the radical, while the atoms of sulphur are marked by commas. Sulphate of copper is written $\dot{Cu}\,\dot{S}$; sulphate of iron $\ddot{F}$ (crossed) $\ddot{S}^3$; alum $\dot{Po}\,\dot{S}^3 + \dddot{Al}$ (crossed) $\dddot{S}^3 + 24\,\dot{H}$ (crossed). Water, however, is generally written Aq. In the same way $\dot{Po}^*$ indicates the sulphuret of potassium; $\dot{Po}\,\dddot{Mo}$ the sulphurets of potassium and molybdenum.

According to the interesting researches of Liebig, nearly all the vegetable alkalies which have yet been examined contain in their combining atom one equivalent of nitrogen, and a variable number of atoms of oxygen; as the following formulæ—which will at the same time serve as examples of the chemical notation—will show.

Cinchonia	$C^{21} + O^1 + H^{11} + N^1 = 159$
Quinia....	$C^{21}\frac{1}{2} + O^2 + H^{12} + N^1 = 172$
Strychnia	$C^{30}\frac{1}{2} + O^3 + H^{16} + N^1 = 237$
Morphia..	$C^{15} + O^6 + H^{18} + N^1 = 290$
Veratria ..	$C^{36} + O^7 + H^{24} + N^1 = 250$
Urea	$C^1 + O^1 + H^4 + N^1 = 30$

* Berzelius and the Germans use K (Kalium) and N (Natrium) for potassium and sodium. The French and English write Po and So. It is necessary to bear this in mind in reading foreign works.

The relative weight of atoms has generally been admitted to equal the specific gravities of their gases; and as one atom combines with 1, 2, or 3 atoms of other bodies, so one volume of a gas unites with 1, 2, or 3 volumes of another gas. A cubic foot of chlorine combines with a cubic foot of hydrogen, and forms muriatic acid; and if the specific gravity of hydrogen be taken for unity, the specific gravity of chlorine will be nearly 36, and such are the atomic weights of these bodies.

Drs. Thomson and Prout have induced British chemists to break the uniformity of the atomic theory, and of the theory of volumes, by reasonings, the force of which their first assertors can now scarcely comprehend. At least, if the statements advanced by Dr. Prout in his Bridgewater Treatise possessed in his mind any validity, they must strike others as mere syllogistic mystifications. There is no solid reason whatever for admitting that two volumes of hydrogen gas in water are equivalent to one atom; or that half a volume of oxygen gas can be considered equal to one atom. If we admit, with Berzelius, Gay-Lussac and German chemists, the identity in this case, as in all others, of volume and atom, the atomic weight of oxygen should be 16, and the atomic weight of the other inflammable bodies should be doubled. The contrary opinion, Berzelius justly remarks, "is an assumption which can never be proved, and it appears to me much simpler; and more agreeable to truth, to admit the same relation of weight between the atom and volume of inflammable bodies as in oxygen, since there is nothing which can lead us to think there is a difference between them."* Another notion ingeniously broached by Dr. Prout, in which he contended that all simple substances are multiples of hydrogen, consequently that their equivalents would be round numbers if hydrogen were taken for unity, must now be frankly relinquished as being in direct opposition to a great number of careful experiments. Even numbers may perhaps look better or be more readily committed to memory, but as substances can now be very exactly weighed, it is necessary no longer to sacrifice accuracy to plainness, or to slur over slovenly experiments with the appearance of scientific generalization. The experiments of Dr. Thomson, and his attempt to show that the atomic weights of simple bodies are all multiples of two atoms of hydrogen, and that these equivalents are therefore invariably even numbers, are also repudiated by the experiments of Berzelius, and proved to be erroneous by the late researches of Dr. Turner. We have touched on these litigated points because they are passed over in elementary works, like the one before us; and because it is really high time for British chemists to bestir themselves, and to throw off the trammels which the premature fancies of eminent men have imposed on their scientific faith.

We extract the following illustrations of Isomerism and Isomorphism, inasmuch as these subjects have only been discussed in late editions of our Chemical Treatises:—

"*Isomeric Bodies.*

"1. Phosphoric and pyrophosphoric acids and their salts.

2. Tartaric and racemic (paratartaric) acids?

3. Pyrotartaric and pyroracemic acids.

4. Citric and pyrocitric acids.

5. Malic and pyromalic acids.

6. Gallic and pyrogallic acids.

7. Cyanic and fulminic acids.

8. The soluble and insoluble cyanuric acids.

9. The two states of the oxide and acid of tellurium.

10. ——————— oxides and acid of tungsten.

11. ——————— peroxide of tin.

12. ——————— phosphate of copper.

13. ——————— bisulphuret of mercury.

14. ——————— phosphuretted hydrogen.

15. Silica and its compounds, and the same after exposure to a red heat.

16. Antimoniates and antimonites, and the same salts after exposure to a red heat.

17. Oil of wine and quadro-carburetted hydrogen.

18. Gum, starch, and sugar.

"*Remarks.*—The discovery of isomerism promises to be one of the most important steps in the progress of chemical theory

* Lehrbuch der Chemie von J. J. Berzelius, 3 B., 1 Ab., p. 44.

that has been made since the promulgation of the atomic doctrine. The principle of isomerism (*ἴσος, equal, μέρος,* part) is, that the same elements may enter into combination in the same proportions, and yet form different compounds, a result that is explained by supposing the combining atoms to assume different arrangements. This principle is exemplified in the bodies classed together in the table, the properties of these being often very different, while their composition is the same. It is well shown, for instance, in the phosphoric and pyrophosphoric acids. When phosphoric acid, immediately after being prepared, by burning phosphorus in oxygen gas, and fusing at a high temperature, is dissolved in water, it throws down a *white* precipitate from nitrate of silver, and it coagulates albumen; but after remaining in solution for a few days, it throws down a *yellow* precipitate from nitrate of silver, and does not affect albumen: in the former case it is pyrophosphoric acid, in the latter common phosphoric acid: each of these acids forms a series of salts, differing in properties, and even some of them in the proportions of acid they contain. If the common phosphoric acid be obtained dry, by evaporating its solution, and be fused, it becomes again pyrophosphoric acid, and on being dissolved in water, returns in a few days to its former state. Thus, while both these acids consist of the same elements, oxygen and phosphorus, and combined in exactly the same proportion, yet they are as dissimilar as if they were composed of different elements. In like manner the cyanic and fulminic acids are very unlike in their properties, yet analysis assigns to both of them the same composition, and the same statement applies to the other groups of bodies in the table. In all these cases we can account for the diversity in the resulting properties only by supposing the atoms to be differently arranged.

"Heat seems to be one of the chief causes that produces those differences of isomeric arrangement, as is exemplified in a number of the vegetable acids, which are much altered in their characters by heat, although their composition does not vary. Other causes, of which we are ignorant, must have the same effect, for the difference of properties, for instance, between the cyanic and fulminic acids, is not dependent upon, nor affected by, temperature.

"Berzelius proposes to distinguish isomeric compounds, by prefixing the term *para* (distinct) to the name of one of them, as the *tartaric* and *paratartaric* acids.

Isomorphism.

"The principle of isomorphism (*ἴσος,* equal, and *μορφη,* form) stated in general terms, is this, that certain bodies have the property of assuming the same crystalline form, and may be substituted for each other in combination, without altering that form. Thus the substances of each group, in the preceding tables, may replace one another in crystallized compounds, without changing either the external figure of the crystals, or the internal form developed by cleavage. The phosphoric and arsenic acids, for example, are isomorphous, or the salts which the one acid forms with bases are of exactly the same form and structure as those of the other. The seleniate of soda is identical in form with Glauber salt. Alumina and peroxide of iron in like manner replace each other, so that we can, for instance, produce, with sulphate of potash and persulphate of iron, crystals perfectly resembling those of alum, but which do not contain a particle of alumina.

"It is also to be remarked, that while many of the groups enumerated in the table are strictly isomorphous, some are only *plesiomorphous* (*πλησιος,* near), or the crystalline forms to which they give rise are very near to each other, but not identical, the measurement of the angles sometimes differing to an extent of two degrees. But this difficulty may be in a great degree obviated by reference to some facts lately established by Mitscherlich and by Breithaupt. They have ascertained that crystals of the *same* substance occasionally differ in the measurement of their angles to an amount of from half a degree to a degree, and that even the symmetric angles of the same crystal are liable to vary to an amount of three degrees. Another important fact is, that many crystals expand unequally, from heat increasing more in one of their dimensions than in another: thus, when calcareous spar is heated from 32° to 212°, it becomes less rhombic, or approaches to the cube. It is, therefore, conceivable, that there may be a certain zero point of temperature at which plesiomorphous groups are truly isomorphous, and that it is unequal expansion from the heat present in them, at ordinary temperature, which in some produces change of form. Mitscherlich is of opinion, that isomorphism is also occasionally modified by chemical affinity."

Pathological Researches of Phthisis. By E. C. A. Louis, M.D., Physician to La Pitie, Paris, &c. &c. Translated from the French, with Introduction, Notes, Additions, and an Essay on Treatment. By Charles Cowan, M.D. &c. London. E. Portwine, 1835, 8vo, p. 388.

In farther gratification of the feeling which we have, by occasional remarks, created in favour of the numerical method,—the method of weighing medical facts and establishing medical principles, by counting and comparing them, and registering quantities, majorities, and minorities,—we make the following extract from the preface of the above work. Without entering upon a discussion of the merits of the "Phthisis" of Louis,—for its value has already been fully estimated, and deservedly placed at the very highest rate among the modern productions of medical writers,—we shall here simply state that the work has met with a competent and accomplished translator in Dr. Cowan, and is introduced by a very able original preface, which latter we have found to contain so able an exposition of the doctrine of counting in diseases, that we are desirous of presenting it for the perusal of all our readers. We are glad of a new opportunity of drawing attention to the subject. The extract contains also some interesting references to the labours of Louis, very similar to such as we have ourselves already made, but worth repeating in a fresh form. We hope to prosecute and promulgate the numerical doctrine with effect in this country.

"Our author presents an interesting example of the effect produced upon the mind, by the contemplation of the uncertain nature of much of our medical knowledge; and he is also an illustrious proof of what the exertions of a single individual can effect, when, unfettered by theory or system, they are steadily directed to the simple unbiassed observation of facts. M. Louis, from the age of seventeen to thirty-three, studied and practised medicine in Russia with considerable success. Gifted with a naturally active and inquiring mind, the multitude of opinions contrasted with the paucity of facts, could not fail to create great dissatisfaction and uncertainty as to the validity of many of the principles most generally admitted, and on which much of our practice was founded.

"Accidental circumstances at the close of this period bringing him to Paris, he soon became acquainted with and eagerly studied the writings of the celebrated Broussais, at the same time assiduously following that distinguished pathologist, both in the hospital and lecture room. The impression produced upon his mind by this direction of his studies, was, that while M. Broussais evidently proved others to be wrong, he was very far from demonstrating himself to be right; that while he rendered palpable the doubts which might reasonably be entertained respecting many of our present principles, he had failed to substitute any thing more satisfactory in their place. From this moment M. L. resolved to devote himself *exclusively* to observation, solely actuated by a desire to relieve oppressive doubt and uncertainty, and with no intention of ever giving publicity to his labours. He at once decided on remaining at Paris, as affording the best opportunities for prosecuting his intentions, and entered the hospital of *La Charité* as a *clinical clerk*, under his friend Professor Chomel. For nearly *seven years*, including the flower of his bodily and mental powers (from the age of thirty-three to forty), he consecrated the whole of his time and talents *to rigorous impartial observation*. All private practice was relinquished, and he allowed no considerations of personal emolument to interfere with the resolution he had formed. For some time his extreme minuteness of inquiry and accuracy of description, were the subjects of sneering and ridicule, and *cui bono* was not unfrequently and tauntingly asked. The absence of any immediate result seemed for a time to justify their contempt of a method, involving too much labour and personal sacrifice to be generally popular or easily imitated; and M. Louis himself, at moments, almost yielded to the increasing difficulties of the task he had undertaken. No sooner, however, were his facts sufficiently numerous to admit of numerical analysis, than all doubt and hesitation were dissipated, and the conviction, that the path he was pursuing could alone conduct him to the discovery of truth, became the animating

motive for future perseverance. Many of the results to which he arrived soon attracted general attention, and among those who had formerly derided his method while they admired his zeal, he found many to applaud and a few to imitate. From this moment may be dated the presence of that strong impression of the necessity of exact observation, by which the school of Paris has been since so distinguished, and which is now gradually pervading the medical institutions of the continent and our own country: it is undoubtedly to the author of the present volume, that we ought to ascribe the practical revival of that system, which had for ages been verbally recognised, but never before rigorously exemplified. For the last five years he has been physician to the hospital of *La Pitié*; the number of advanced students (principally English, American, and German) who follow his visits and clinical lectures, are the best testimonies to the indefatigable zeal and talent with which he still pursues his investigations, and, contrasted with the now deserted wards of M. Broussais, forms a practical illustration of the striking change which has been effected in the spirit of medical inquiry.

"With no preconceived views of his own to establish, (and, we believe no one who *has* will observe seven years!) all results from such researches cannot fail to address themselves to our confidence, and in the present instance they have not only the additional value of having been made at a period of life when the judgment is matured and fancy regulated, but by one who, so to speak, *began his studies* after several years practical experience of their difficulties. He regarded each individual example of disease, as a problem which could only be solved by patient and exact observation; with this conviction, he studied *all* the functions during life, from the commencement of the disease to its termination; for the same reason he examined *all* the organs after death; and when attempting to arrive at any general conclusion, he not only analysed the facts he had collected relative to that disease, but submitted them to a rigorous comparison with other diseases which were at all analogous. It is evidently one thing to determine the series of symptoms, or alterations of structure, which are present in any particular affection, and another to discover, what symptoms or alterations are special and characteristic: the one is obtained by confining ourselves to the disease itself; the other only can result from comparison. A very short time was sufficient to make the discovery that *observation* was immensely difficult, a fact which authors have hitherto overlooked, thus plainly proving that they themselves observed incompletely. The power of correct observation is not the attribute of ignorance, but is, *ceteris paribus*, always proportionate to the knowledge the individual possesses. * * * * * * * * Not to be continually the dupe of sources of fallacy (and the most practised do not always escape), requires long habit and extensive general knowledge; and no one can have *apprenticed* himself, as the author in his preface remarks, to the *trade* of minute and rigorous observation, without a deep conviction of the difficulties attending it, and the necessity of long-continued perseverance.

"We are the more anxious to insist on the great difficulty and infinite importance of observation in medicine, since the very impression is an element of success, and of that caution we should never be free from, in the accumulation of facts, by which our own opinions and those of others are to be regulated. The general habits of our schools and hospitals render the warning still more necessary; for while observation is nominally recommended to the student, and even sometimes pursued with zeal and partial success in the first years of his medical studies, it is too often thrown aside with the character of a student, at a moment when he is just beginning to acquire the power of observing correctly. The very fact that the task is, in the majority of instances, imposed upon those just entering their career, is calculated to impress the mind with a very imperfect and insufficient idea of its importance. The student should be *taught* as well as *allowed* to observe, and the results of his first attempts exposed to the strict scrutiny of a master, who has not himself relinquished the occupation. He should be habituated to analyse and

compare the cases he has collected: the time and attention necessary for even a small number of facts, to reduce them to order and trace their relations, would convince him of the difficulties he at first little anticipated, and at the same time impress him with the importance of the results a more extensive and correct application of the method would ensure.

"The advice of the illustrious Sydenham on the principles which should guide the observer, should never be forgotten. 'In writing,' he says, 'the history of diseases, every philosophical hypothesis which has prepossessed the writer in its favour, ought to be totally laid aside, and then the manifest and natural phenomena of diseases, *however minute*, must be noted with the utmost accuracy.' We should indeed never replace description by opinion,* or employ words and expressions the meaning of which is not definite, but might be interpreted to coincide with the peculiarities of individual opinion. 'Temperament,' 'pneumonic sputa,' 'catarrhal expectoration,' 'marked febrile movement,' 'healthy state of the digestive tube,' and an infinity of other expressions, should never be substituted for the simple description of what *we* include by the terms. The value of particular phrases is relative, and liable to vary with the daily progress of science; their real meaning can only be surmised by reference to the prevalent opinions of the time. The observer should always recollect that the reader has no means to judge of his skill but in proportion to the minuteness and precision of his descriptions; this observation should be sufficiently complete to enable a stranger to understand and employ it, the language should be clear and concise, and in all enumeration of details, the talent of saying a great deal in a few words should be assiduously cultivated. The want of attention to this rule, renders the perusal of the great majority of observations irksome and fatiguing. Lastly, let him never forget, that mere opinions and unsupported conclusions cannot be admitted as additions to our knowledge until they have again been exposed to the searching ordeal of facts, while faithful description can never cease to be valuable, however absurd the hypothesis it may have tended to establish.

"But observation, however extended and exact, is of itself insufficient to generate conclusions, for, collected as our facts must have been, through a series of months or years, and consisting of an infinite variety of details, no memory could recall and no mind could grasp their complicated relations with each other. To accomplish this, the '*numerical method*' is necessary, that is, *counting* the number of all the individual facts, comparing their relative frequency in cases of a particular class, and then determining their real value by a comparison with facts of other classes, which have also been reduced to similar elements. This is the plan pursued by our author, and which must be adopted by all who seek to establish truth and arrive at general results. Hitherto we have satisfied ourselves with the authority *of experience*, and its currency in medicine is such, that any distinct definition of its value has scarcely been attempted. But let us inquire what is really included by experience. Is it not the expression of the conclusions of the mind upon one or more subjects to which the attention has been habitually directed? Is it not, simply, the final impression produced by a review of the past? If the discovery of truth be its tendency, why has individual experience been hitherto so discordant? The answer is easy. In a science like medicine, where the difficulties of observation are so great, and the objects to be observed so numerous, where theories bias, and individual peculiarities necessarily exert their influence, nearly all, if not all, the conclusions of mere experience are varying and fallacious. Who does not feel himself naturally inclined to study one class of affections more than another, to be arrested by particular symptoms, to be more interested with facts, which apparently coincide with some favourite views he has either adopted

* "Appearances should always be described in terms which involve no opinion as to their causes. These are the objects of separate examination, and will be best understood if the facts are given fairly, without any dependence on what should yet be considered unknown; this rule is very essential where the facts are in a certain degree complicated."—*Dugald Stewart.*

from others, or insensibly formed during the course of his studies? How strongly all *extraordinary* facts and what we call *interesting cases*, are engraven upon the mind, and for ever prominent in the retrospect, while the great mass of *ordinary* and consequently *important* occurrences are overlooked or forgotten! Some unhoped-for success attending the means we employ, how firmly has it associated the cure of the disease with the specific nature of the remedy, and how easily do we admit as a fact, what the observation of another proves to be the mere expression of a coincidence! Every practitioner has his peculiar therapeutics, his favourite dogmas to support, and successes to boast; and when we reflect on the innumerable opinions which exist on all complicated subjects, where conclusions are founded on the materials of unrecorded individual experience, materials, which opportunity, education, and a thousand accidental circumstances are for ever modifying; we cannot, I think, be surprised that the results of experience in medicine have not been more uniform and satisfactory. While anxious to impress upon the reader my conviction that unrecorded experience can never become the corner-stone of any science whatever, I admit that it has justly acquired, in a few rare instances, unusual relative value from the capacious intellect and retentive memory of some highly favoured minds.

"Devoted as we have described our author to have been to the observation of facts, and divested as he was from the very state of mind which actuated him to the course he so undeviatingly pursued, from all *preconceived opinions*, yet it was impossible that, during so long a period of time, his mind should not have been unequally impressed by the phenomena before him, and have unknowingly fixed some in his remembrance to the exclusion of others, instinctively allotting them a relative value, and arranging them to favour some *à priori* conclusions. Now no circumstances could possibly have been more favourable to test the value of experience, than those in which M. Louis was placed; yet, when at the close of his labours, he submitted *all* his facts to the unerring test of arithmetical analysis, *in every instance were the à priori conclusions which he had formed from the recollection of his own facts, found* TO BE ERRONEOUS.* This most remarkable result ought to be indelibly engraven on the mind of every observer, and inspire a doubt as to the validity, not only of the experience of others, but of what he has hitherto perhaps considered almost infallible, *his own*.

* * * *

"We shall briefly describe some of the most distinguishing features of the numerical method. The numerical analysis requires in the first place, a sufficient number of carefully collected facts on the same subject; our object is then to classify their corresponding elements, so that not only are all the details of those facts successively submitted to the mind, but their relative frequency and value are more easily estimated. To effect this, synoptical tables are indispensable, and their number necessarily proportionate to the complex nature of the facts we are analysing. Each organ, for instance, must have a separate column, which includes its description in every case we intend to make use of, adopting as near as possible similar terms for similar conditions.

"This however alone would be very inefficient, as in a complicated structure like the lungs, where so many alterations occur, a long series of minute descriptions would defy analysis from simple inspection; each organ therefore in its turn becomes the subject of a separate table, which also consists of subdivisions proportionably numerous as the object we examine is simple or complex. When we have thus arranged all the elements of our facts, we compare the results of our different columns with each other, having it thus in our power to view them in their various relations, while we may at pleasure refer particular facts to their respective observations, the same number accompanying all the details which are scattered through a variety of tables.

"It will be remembered that there is

* "'Quand je me suis fait une idée, *a priori*, des faits non encore analysés, j'ai toujours vu, apres cette analyse, que mon idée, à priori *était fausse*.'—Letter addressed to the Translator from the Author, June 23, 1831."

nothing arbitrary in this mode of proceeding, nothing left to individual caprice or preconception; for, in the arrangement of our tables we perform a purely mechanical operation, indiscriminately putting down all the facts in their respective columns, without any reference to the conclusions to which they ultimately tend. The correctness then, of any opinionswe may form, is confirmed or rejected by a test over which we have no control, and the evidence of which no well-regulated mind can resist, while not only the relative importance of many facts to which our attention had been less distinctly directed, or which we had wholly forgotten, is forced upon our consideration, but we are also led to the discovery of what we have only casually or incompletely described.

"It will at once be perceived that certain laws require for their elucidation a much larger number of examples than others: where a hundred observations may in one case be sufficient, three times that number may be required under other circumstances. Indeed, as a general rule, the more complicated the objects we examine, the greater the number of facts necessary to establish our conclusions; for the same elements not being repeated in all their relative aggregate number must vary, and their real value can only be estimated by tracing them through a larger number of analogous instances. Were we, for example, analysing 100 cases of pleurisy, the value of any symptom invariably observed would be considerable, and perhaps sufficiently established; but, were it only present twenty times out of that hundred, its real importance would be much less positive, and require an additional number of facts for its determination.

"For the appreciation of treatment, the necessity for numerous facts is peculiarly apparent, for though a hundred cases would be valuable evidence in favour of any one system of cure, it is only by comparison with others that its real efficacy can be decided. There are also other sources of fallacy which must not be overlooked; such as the severity of the disease, the age and sex of the patient, the state of health at the time, the natural duration of the affection, the epidemic influences which may be present, &c.; these are all questions to be solved before we can arrive at any positive results. From these rapid reflections, we may form some idea of the numerous difficulties which surround every question of therapeutics, and feel the necessity of exercising the greatest caution in ascribing any definite value to a remedy before we have well determined, by numerously analysed facts, the exact circumstances under which its action has proved to be beneficial. No part of medical knowledge is more in want of rigorous method of investigation than that of therapeutics, and this must ever be the case, until a system analogous to the one we have briefly described shall be generally adopted.

"It is not our intention, in advocating the numerical method, to conceal for a moment its difficulttes; these are great and numerous, but at the same time they can never form any solid argument against its utility, though they will necessarily curtail the number of its disciples. It is in fact the only method which it is in our power to pursue; it is the only control we can possess over assertion, the only test for opinion, and though not all we can wish, and no doubt will ever be found inadequnte for the decision of many questions, yet its application to a sufficient number of facts must inevitably give us the most exact and best possible knowledge of those facts. * * * *

"How could we have ascertained that tubercles in any organ of the body, after the age of 15, involved their presence in the lungs? That phthisis almost invariably commences in the upper lobes? That it is more frequent in women than in men? That pneumonia is more easily resolved in a tuberculated than in a healthy lung? That simple bronchitis commences at the base of the lungs, pursuing a course inverse to that of phthisis? That chronic peritonitis indicates pulmonary tubercles? That acute affections, when free from complication, are generally confined to one side of the body, or one part of an organ if single? How could these, and many other results, be obtained but by rigorous observation and numerical analysis? And what theory have we ever heard of, which could have led us to the

same conclusions? Had they been advanced as the fruits of speculation, how absurd some of them would have appeared! and their very announcement would have almost ensured their rejection; but founded as they are on the evidence of facts, our ignorance of the laws on which they depend is no bar to their practical utility. We know of no considerations more directly in support of the numerical method, or more encouraging to all who have the necessary opportunity and perseverance for its adoption, than this almost spontaneous creation of laws, which must have escaped the sagacity of reasoning, from the simple fact, that when demonstrated, they refuse to coalesce with any of our preconceived opinions."

The Naturalist's Library. Conducted by Sir W. JARDINE, Bart. Entomology. Vol. 2, Beetles. By JAMES DUNCAN, M. W. S., &c. London, Highley, 1835, pp. 269.

THIRTY-TWO coloured plates, including the figures of one hundred and ten insects, with a description of every insect figured, and a concise memoir and portrait of that universal genius among naturalists, Ray, —a *ray* he was indeed in the dark paths of science in *his* day—present irresistible temptations to the student who is forming an economical library of entomological knowledge. We have already strongly recommended the work of which this handsome volume is a series, to the patronage of naturalists, and now, on the appearance of a new part, assure them that the character of the work is additionally strengthened. The text well exemplifies the various subjects, and the colouring does credit to the army of artists which it employs. The brilliant and attractive coats—the metallic tints—of the outer envelope of the beetles is excellently copied.

It is a curious fact that the class of animals a species of which received "divine honours" in one age, came into such discredit in another, that the lady of a noble house was charged with lunacy for investigating their structure; while in a third, the class obtains the marked attention at once of the humblest students and the highest philosophers. To retrograde again will be impossible—the press has interfered.

THE LANCET.

London, Saturday, May 30, 1835.

WITH respect to the condition and prospects of the science and practice of medicine in this country, the medical inquiry which was conducted by a Committee of the House of Commons in the last session of Parliament, was by far the most important event that has ever occurred in medical history. If the evidence elicited in that investigation be examined as a narrative of by-gone transactions, nothing could be more interesting to the medical practitioner; but when it is regarded as the basis on which the whole superstructure of the science and practice of medicine is to be founded, no record can be considered of equal value by the mind of the medical philosopher.

With these impressions operating with full force on our feelings, we last autumn commenced the publication, in a distinct work, of a verbatim copy of Part I. of the Evidence, as it was issued to the members of the House of Commons, and there now remain to be published of that part, only a few pages and the index, to be included in a single number, in order to render that portion of the evidence as complete as it issued from the Vote Office of the House of Commons.*

Since that work was undertaken, our position has been so far changed with respect to Parliament, that a practice which might have been tolerated in an individual not a member of the House of Commons,

* This part will now be completed and published forthwith.

might justly be regarded as a serious breach of privilege by a person holding a seat in that assembly. Our transgressions, therefore, shall not extend beyond the completion of a duty which was begun without any possible foreknowledge of an occurrence which has been calculated to, and must necessarily, interfere with, the publication of all the Parts in the mode which was adopted relative to the part that contained the "Evidence of the College of Physicians." The moment, therefore, that we have published the Index and remaining pages of Part I. of that Evidence, the printing of the Medical Report, *verbatim*, in a detached work, will be concluded.

What then is to become of the rest of the Evidence? Is it designed that it should merely weigh down the shelves of members of Parliament, or be excluded from view in the closets of the incorporated monopolists? Ah! the corruptionists dread the diffusion of this Evidence. But diffused it shall be in every quarter of the globe, in every colony, isthmus, island, and promontory, where British Physicians and Surgeons exercise their healing functions. There can be no violation of privilege in publishing an ABSTRACT of the remaining portion of the evidence, and we will take especial care that an Abstract containing all the really useful parts of the testimony, shall be published through the medium of the pages of THE LANCET. It would be a sin, a shame, an offence against medical ethics, to allow the substance of the testimony to be excluded from the observation of the profession.

Accordingly, in the present Number of this Journal, at page 281, the first product of this our determination is presented to the notice of our readers. As the mode of executing the Abstract can be best understood by an examination of the document itself, we shall merely state that while all verbiage and all extraneous matters have been wholly expunged, every point of interest or importance has been carefully retained. Where the form of question and answer best exhibited the state of confusion or tortuosity of the mind of the witness, that form has been preserved. In other cases, in order to avoid encumbering our pages with large masses of unmeaning words, the grains have been and will be selected from the chaff, and submitted to the notice of the reader in a form free from objection. In all instances the *words* given are those which were used by the witness, and no statement of fact, or expression of opinion employed by the witness, has been omitted or varied in the process of condensation. At the same time, in the hope of facilitating the convenience of reference, the paragraphs have all been numbered. The work will be one of labour and difficulty, but it shall proceed without intermission until it is fully accomplished.

CHARTERHOUSE, May 29th.—In consequence of the death of Dr. VETCH, an army surgeon who held for several years past the office of physician to this institution, an active canvass was commenced by some medical gentlemen, which has ended fatally to the interests of all the candidates,—the governors of that "ancient and venerable establishment" having abolished the office as one which was perfectly unnecessary and absurd. The cel-backed physician set himself, as usual, hard at work to get a *friend* appointed, and for that purpose gave the son of Dr. FARRE, a young *Fellow* of the College, a certificate of merit, accompanied by what the pedantic president calls his *official* interest, whilst he really employed (by preference) his *private* interference in behalf of Dr. FORBES, who is only a *licensed* physician.

[*From an Edinburgh Correspondent.*]

The liberals of the north have watched, with no less anxiety than their southern coadjutors, the progress of Mr. Warburton's parliamentary medical proceedings; and though their prospects were overcast during the short interregnum of the mock reformers, yet now they consider the horizon to be cloudless, and anticipate, without fear, a successful result to the proceedings of the Medical Committee. It may readily be believed that a return of the Melbourne ministry, which was to us most cheering, was extremely unpalatable to the corruptionists, and they have accordingly dispatched to London *Professor* Turner, to see how the wind was blowing and look out for squalls. Turner was selected for this honourable employment, because it was hoped that he was less known amongst the Londoners as an opponent of all reform, than Dr. W. Thomson, who honoured Babylon with his company all last summer, and who, you ought to know, was not an unpaid labourer in the vineyard. Being the son and *elevé* of the celebrated chairmaker, the father was too old a fox to let his son work for nothing, and this young corruptionist contrived, consequently, to get two hundred guineas, over and above his expenses, paid in equal shares by the University, the College of Physicians, and the College of Surgeons. You see, therefore, that we can employ secret service money for good deeds here, as well as they do in other quarters.

The present *employé* (Turner) is well qualified for his task, and his movements are worthy of being watched. *He* also is a successful disciple of the Thomsonic school, and got a chair made for him by our clever manufacturer. Along with Allen, the well-known functionary and man of all work at Holland-house, Turner, under the mask of a Whig, will work hard to stop the pace of the medical reform coach at the Home-office; while in the disguise of a Conservative he will, in the intervals of labour in that quarter, ply an oar in the Tory boat. I know that they expect to find an able workman in Sir Benjamin, whose fame at *St. George's* we all appreciate, and whose education and habits under the greatest scientific robber of this or any other age, must make him a useful man to Turner. Until we saw Mr. Cliff's evidence in The Lancet, we had no idea of the enormity of Sir Everard Home's conduct.

Our ancient professor will also confide a good deal in the well-known liberal principles of Benjamin Travers, but if the report be true, which is in circulation here, that Benjamin has got a share in the tea shop of Travers and Co., it is not likely that he will trouble himself much about medical reform. Lawrence will be the most difficult pseudo-reformer to handle, and to know anything of his real organization he must undergo a thorough stethoscopic examination, which our professor is well able to perform. * *

New Accoucheur of St. Bartholomew's.—The *reformers* of this hospital have been assiduously employed in choosing a midwife for the school since the dismissal of Dr. Ashburner, and have just terminated their labours by the unanimous election of Dr. Lee,—not the Lauthian Pirate, as he is termed by way of distinction, but Dr. Lee the accoucheur (as he calls himself) of the *Middlesex Hospital.*

IMPOSITION IN THE

SALE OF A "MEDICAL SHOP PRACTICE."

On the 19th of this month, an action was brought in the Court of Common Pleas before Sir N. C. Tindal, by Mr. *John Rawlone*, of 207, Bermondsey Street, against *Arthy Matthews*, of Robertsbridge, Sussex, to recover damages for alleged false and deceitful representations made by the defendant to induce the plaintiff to pay three hundred guineas to the defendant for a medical practice connected with a retail shop on the 8th of the previous January. The plaintiff and defendant had been fellow students together under Mr. Sleigh, and thus possessed some acquaintance with each other. Mr. Sergeant Taddy and Mr. Steer opened the case for the plaintiff, and called *Mr. John Gill* to prove that he had received instructions from the defendant to sell his business, and to insert the following adver-

tisement thereof in the *Times* of Dec. 22, 1834.

"To Surgeons, &c.—An eligible opportunity for any gentleman wishing to get into good practice is now offered. Combined with the out-door business, a snug retail and counter practice is carried on, producing one guinea a day over the counter. Long-established capital premises and low rent; price 400 guineas. Satisfactory reasons will be given for its disposal. Apply to Mr. Gill, 23, Earl Street, Blackfriars."

Mr. Gill said he remembered Mr. Rawbone calling on him in consequence of the advertisement, when he (Mr. G.) communicated to Mr. Rawbone the following particulars of the practice, as received from the defendant:—"Established ten years; rent 30*l.*; taxes 10*l.*; house in good repair, and eight rooms; agreement for lease for three years from October 1833, and further term may be had; returns 700*l.* per annum, including seven guineas a week upon an average, ready money. The R division of police is attended; 81 men, for which 18*l.* per annum is paid. In the last ten months 95 cases of midwifery have been attended. No introduction will be guaranteed. Reason for disposal, the proprietor leaving London to attend his own father in an alarming state of illness. Goods at a valuation; optional; sum required 400 guineas, and no less; *cost eight hundred and fifty pounds.* Within the last twelve months there have been 300 payable patients in the connexion. The rail-road will pass near the house. Drugs at least 70*l.*, and shop well fitted."

Mr. T. W. Green proved that the defendant represented to himself and the plaintiff that the retail and counter practice had produced one guinea per day on an average during the last twelve months, besides the receipts for the out-door practice, and about 100 midwifery cases, and that he had lived there during nearly three years.

Mr. C. Corey proved that the defendant was living at 46, Hunter Street, in September 1833.

Edwin Donovan lived as errand boy with the defendant for *eight weeks* previous to his selling the business, and left on the 7th of January. He was frequently in the shop, and saw the assistant write down on a slate what he had taken during the day. He heard the defendant reckon up generally what had been received, and the sum varied from *three to seven shillings a day*, never heard of more being received. He had only taken out medicine *to one patient.*

John Becket proved that he had lived with defendant as errand boy about *four months*; remembers to have taken medicine to *two places only*; does not know what were the daily receipts, but once heard the defendant say that they had taken 10*s.* 7*d.*, which was *a fairish day.*

Messrs. Porter and *Hollingsworth* proved that the defendant had *introduced* the plaintiff to them, but that the defendant had *never attended them as patients.*

Henry Goddard proved that he had lived as assistant with the plaintiff from the 27th of January last, and had carefully attended to the business, which had produced, on an average, *four shillings and eight pence per day.*

Mr. Sergeant Talfourd addressed the jury for the defendant, and called Mr. Hillas, of Holborn, who stated that he had sold the business to defendant in October 1833 for *four hundred pounds*; had done business there to the amount of 705*l.* per annum; had about forty midwifery cases per annum, and could have had twice that number if he would have attended for less than one guinea, which he never did. He thought the shop much improved, and well worth 300 guineas. (*Cross examined.*) He did not go to live in the house at 207, Bermondsey Street, until March 1831.

Mr. John George Blackall proved that he lived as an assistant to the defendant, and took in the shop 3*l.* 10*s.* per week; that in one week he recollects to have taken 8*l.*, and thought the business worth 250*l.** (*Cross examined.*) Admitted that the 8*l.* was for an order given to him *by the defendant himself*, for medicines for a lady in the country, and defendant paid him the money over the counter.

Mr. John Steven Fitzpatrick lived as assistant with the defendant for about six weeks; he left on the 7th of January, and took in the shop from 2*l.* to 2*l.* 10*s.* per week; the defendant attended *one case* of midwifery only, whilst he was with him, for which he received one guinea. He remembers that the defendant said to the plaintiff, when he was about to buy the business, that he would not *guarantee* him one shilling per week.

Mr. Sergeant Taddy replied, and remarked on the non-production of the shop books, which had been *taken away* by the defendant when he sold the practice.

The Judge summed up, and the jury shortly afterwards returned a verdict for the plaintiff, damages 200*l.*

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* Mr. Blackall stated to Mr. John Gill that the daily receipts were 1*l.* 1*s.* per day; to Mr. G. Godfrey, that they were 4*s.* 6*d.*; to Mr. Rawbone, that they were 8*s.*; and to the Court and Jury, that they were 10*s.*

SCHOOL OF THE DUBLIN COLLEGE.

To the Editor of THE LANCET.

SIR,—In my last communication I stated the case of the Licentiates of the Dublin College of Surgeons, describing the outrageous injustice by which the College dares, in spite of the solemn treaty between us, to exclude us from the membership. I mentioned a few of the injuries that arise to us in consequence, and I declared the *cause* of this infamous conduct on the part of the College, viz. the maintenance of the school in its present position, as a lucrative engine of monopoly in the way of teaching, and of exclusive introduction to practice.

This is so notoriously the cause that I went perhaps *uselessly* into the proof. Now, sir, since *the school* is undeniably the cause of such injustice and tyranny, since, in order to maintain that establishment, a considerable portion of the profession must be debarred their just rights, marked with demerit, and *defrauded* of their practice (for the exclusion which attends their inferiority of rank is nothing less); it becomes a solemn and serious duty to discuss the advantage, if such there be, of this institution.

Deducting the number of those who are interested in its maintenance, the majority of members and licentiates have long been fully convinced that the school is not only an unnecessary and a useless appendage of the College, but positively injurious to education and science, and that the profession would go on a vast deal better were that school abolished; nay, more, that nothing will ever go right as long as it drags on its baleful existence. The College School, however vaunted in puffs and advertisements, has altogether failed in instituting a correct and valuable system of education. I presume we may determine the value of a system of education by its effects on the intellect, the morals, and the tastes, of those who have been subjected to its influence, viz. the members of the corporation themselves, of whom two generations at least have flourished since the foundation of the College. Yet, for half a century, with scarcely an exception, not a single original idea in any one branch of science has ever been given to the world by them, nor a single compilation exhibiting the useful qualities of industry, research, and good judgment, that will outlive the short memory of their petty intrigues. They are obliged to build their claims upon science, as the case may be, either on some ephemeral monographs, scattered here and there, relative to some "affections" in surgery, or an imperfect and shameless plagiarism of one or two well-known works on anatomy, or a mutilation and amplification of a chapter in *Zinn de Oculo Humano*. In fact, instead of leading to the acquisition of knowledge, and the expansion of the mind, the present system seems to operate in the very opposite direction, and actually to stifle ordinary judgment and common sense. Its supporters fail in common sense to perceive, or common energy to reject, or even modify, a condition of things which, it is evident to all the world beside, wars against the entire interests of medicine. And, what are its effects upon the tastes and morals of the same individuals? Where do we see any evidence of the high, manly, independent, and candid bearing, of men who have been habituated to the discipline of the schools of genuine philosophy? This absence of the finer feelings of humanity extends itself, as a result of the vicious system, to the very boundaries of the corporation, else would they rise to a man, and declare their abhorrence of the innumerable violations of sacred engagements which have been entered into by the College. Here then, in the body itself, we have a melancholy but triumphant *experimentum crucis*, which is completely condemnatory of the school, its system of education, and its professors. Nor could it have been otherwise when once the school was appended to the College. A golden opportunity for a lucrative job was thus opened to the most skilful adepts in corporate intrigue. The booty could not be the property of one, so several heads were put together, and the school was converted into the property of themselves and nominees, not merely *pro hac vice*, but *in secula seculorum*. Their object has been,

not to educate, not to give knowledge (*nemo dat quod non habet*), not to increase the intellect, improve the morals, refine the tastes, and correct the heart. No; but like industrious huxters and chandlers, they sought to establish the profitable trade of monopolists, who supply vulgar demands for inferior articles, and to support which hundreds of pounds are annually drawn from the funds of the College. In order to make the school a necessary and legal appendage (formerly it was merely voluntary), the new charter was obtained, ostensibly, indeed, that the College might accommodate itself to the increasing liberality of the times, by admitting pupils without the degrading vassalage of an apprenticeship to the honour (?) of the license, but really to perpetuate the abuse.

But if the injustice inflicted on the *licentiates* is too trifling to call for interference, surely it is time to step in on behalf of the public, and demand that the education of those to whose medical care the public health is to be confided, should be raised to its proper condition, and the country prevented from being deluged with half-educated persons, whose knowledge (so far as the quantity communicated by the College is concerned) cannot be said to extend beyond the limits of that which is derivable from the "Dublin Dissector," "Cooper's First Lines," and the merest smattering of the properties of drugs.

Never did institution start into existence with so many and so great advantages as did the Royal College of Surgeons in Ireland. Young and vigorous in itself, it had all the benefit of the oldest experience in the history of other foundations at home and abroad. It was free from the incumbrance of all "vested rights," all ancient abuses, all illiberal, aristocratic, and exclusive laws, all the sacred cobwebs of antiquity. It possessed public confidence in a high degree—nay, the public purse was freely opened to it. What a glorious career was before it! Had it been managed with probity, and in the spirit of its former charter, had it marched with the spirit of the age, and occasionally headed the improvements of the day, as it might have done, already it would have taken the lead of all our domestic institutions. It might have vied with the *Royal Institute* of France, not merely in medical knowledge, but in all its tributary sciences, for all the sciences are tributary to medicine. This it might have done, but what in reality is it? Unhonoured known for no merits, not even acknowledged as a scientific body by the *British Association*, into which august assembly its members are obliged to seek admission by other means than their College rank, their *alma mater* unesteemed, and having no influence in the latitude of knowledge and scientific attainment. The College is simply a boys' school, for teaching the alphabet of anatomy and surgery for the personal advantage of Messrs. Jacob, Harrison, and Co. But we are not without some source of consolation. The evil is too great to be prolonged much longer. Reform is at hand. Past experience will be appealed to. The experiment of the school has been tried, and the ruinous blunder will be corrected. Nay, more; the managers and abettors of the school system have also been tried and found wanting, and whatever changes take place, no reform will be complete or satisfactory which leaves them the slightest power of committing fresh abuses, or offending by their position the eyes of their professional brethren.

I am, sir, your obedient servant,

A LICENTIATE OF THE R. C. S. IN IRELAND.

Dublin, May 16, 1835.

THE MEDICAL-PRIZE SYSTEM AT THE WESTMINSTER SCHOOL.

To the Editor.—Sir,—In reply to your queries as to whom the prizes were awarded by, and by whom the examinations were conducted, I will endeavour to explain the system of awardment and examination. *First.* The prizes were awarded in Anatomy by Dr. Todd, in the Practice of Medicine by Dr. Burne, in Demonstrations by Mr. Dobson, in Materia Medica by Dr. Weatherhead, in Midwifery by Mr. North, and in Chemistry by Mr. Crump. A first and a second prize in each of the above branches was given. *Secondly.* The examinations were con-

ducted in an unprecedented manner. The candidates were locked up in a room with pen, ink, and paper, to answer the questions (fifteen in number) in writing, the *name* (not a *motto*) of each candidate being affixed to the end of his answers; the answers were then delivered by the candidates to the porter, who handed them over to the lecturer who had submitted the questions, and the lecturer, without referring to his colleagues, or any one else, awarded his prizes according to his own discretion or partiality. An instance in which the latter quality was exercised, I will exemplify in the awardment of the second anatomical prize. The candidates were in this instance invited to the worthy lecturer's house at seven p.m., where the questions were delivered to them. In about five hours' time the answers were returned to the *lecturer*, *examiner*, and *distributor*, who, in three quarters of an hour, decided who should have the prizes, although the papers given in would have taken an examiner full two hours to peruse, were he ever so fast a reader. It would certainly seem by this that he must have had a predetermination to award his prizes to his favourites, especially the second. On announcing his decision, he stated that it was difficult to make the award, as two of the papers were extremely alike in merit; but that in *his* opinion, the answers of one candidate were rather clearer than those of the other. And who was the other? Why, a *ci-devant* pupil of this impartial distributor of medical honours. There was but one examination per day, so that the examinations and awards were protracted through six days. The successful candidates were, with one solitary exception, the private pupils of the lecturer. I am, Sir, your obedient servant,

A. M. S.

REPLY FROM MR. HUGHES.

To the Editor.—Sir,—There is only one part of the letter of Dr. Ramadge inserted in THE LANCET of Saturday last which I think it necessary to notice. It is that in which he says that he thinks he can rebut my accusation against him by making one against me, a singular mode of *reply*! The circumstance to which he alludes occurred three or four years ago, when the account of the medical fracas between Dr. Ramadge and Dr. Tweedie appeared in THE LANCET, Dr. Tweedie refusing to meet Dr. Ramadge, in consequence of his attempted vindication of Mr. St. John Long. Meeting Dr. Tweedie a few days afterwards, in the shop of a medical bookseller in Fleet-street, I complimented him on his spirited conduct, and asked him if the statement which appeared in THE LANCET was correct. He said that he would not vouch for the whole particulars, but that the facts were substantially true. I mentioned this conversation to my friend Dr. Ryan, and he afterwards published my statement in the *London Medical and Surgical Journal*. This is the head and front of my offending. I have now replied to the letter of Dr. Ramadge, and in language very different from that which has been used by Dr. R. Can Dr. Ramadge satisfy the profession as well as himself on the point upon which I addressed you? It is pretty plain what you, to whom the profession is so deeply indebted, and to whom it looks forward for still further benefits, think of this matter. It was a little severe on the Doctor to print his letter "verbatim." I am, sir, your obedient servant,

W. HUGHES.

90, High Holborn,
May 26th, 1835.

PREVENTION OF HYDROPHOBIA.—*To the Editor.*—SIR,—The suggestion of Dr. Burnes relative to the bites of rabid animals redounds more to the benevolence of that gentleman than his sagacity. The situation of the wound most frequently renders his plan impracticable. There is an old saying that "a man may bite off his own ear, but he must do it with a devil of a jerk;" and although we exist in an age overflowing with benevolence and philanthropy, the sufferer would perchance find it difficult to get the kind office of suction performed by deputy.

There are cogent reasons why the doctrine held forth by Dr. B. ought not to be promulgated. The practice, where feasible, is of doubtful efficacy; and the timid and irresolute might be induced to rely upon it exclusively, and to forego excision. From a number of cases on record, as well as from many others not made known to the world, it would seem that hydrophobic matter is not so readily absorbed as other animal poisons. Many individuals are bitten by rabid animals, in whom, although hours, and even days, have elapsed between the infliction of the wound and the excision of the part, excision seems to have saved the patient, and a person is rarely

so circumstanced as to be unable to obtain within a few hours the assistance of a competent operator, which it ought to be his first effort to seek as the only means of security against future peril. Dr. Burnes is by far too candid to take these observations offensively. He is held in high esteem by none more than by your humble servant,

PODALIRIUS.

May 25th, 1835.

To the Editor of THE LANCET.

SIR,—In your Journal of the 23rd instant a letter from one of the Governors of *Christ's Hospital* speaks of the ringworm, and a Mr. Manico, of the *Royal Naval Hospital*, who had eradicated the same disease from his establishment. It is equally due to the practice of this infirmary, and to Mr. Plumbe, who was one of the surgeons of the institution, to state that the treatment pursued by Mr. Manico is from a prescription and information communicated by me through Dr. Tweeddale, the application being a slight alteration from a recipe originally suggested by Mr. Plumbe. Dr. Tweeddale, one of the physicians to the Royal Naval Hospital, and also to this institution, having stated to me how useless had been all the endeavours employed to destroy the ringworm in that establishment, said that he wished I would make known to him the course of treatment pursued at this institution; I did so; and of its efficacy we have had daily proofs, from many cases under the care of Mr. Davey and Mr. Wing, the latter at this time being in attendance upon upwards of twenty patients connected with this infirmary, who are in a course of successful treatment. I have the less hesitation in intruding upon your pages, knowing how ready you ever are to hold out even-handed justice to all parties; and I am satisfied that Dr. Tweeddale will, from his high sense of honour and perfect knowledge of the above circumstances, fully corroborate the statement I have made.

I am, Sir, &c. JOHN RICE,
Resident Apothecary.

Royal Metropolitan Infirmary for Sick Children, 11, Broad-street, Golden-square; 25th May, 1835.

BOOKS RECEIVED.

THE first part of a translation of Andral's celebrated "Clinique Medicale" has just been published by Mr. Renshaw of the Strand. The original work is a production on which eulogy can hardly be too freely expended in conveying a sense of its value. We have not yet had time to ascertain the merits of the translation.

A little work, entitled "A Therapeutic Arrangement and Syllabus of the Materia Medica," has lately been produced by Dr. James Johnstone, of Birmingham. It is well conceived and ably executed, and will be found by all classes of practitioners to be a useful work of reference, in which there is neither a superfluity of words, nor a paucity of information, to negative the purposes for which a syllabus should be constructed.

Observations on the Heart, and on the Peculiarities of the Fœtus. By James Jeffray, M. D., Prof. of Anat. in the Univ. of Glasgow. 1835; 8vo, pp. 112, plates.

The Transactions of the Provincial Medical and Surgical Association. Vol. 3. 1835; 8vo, pp. 488.

Philanthropic Economy; or the Philosophy of Happiness, practically applied to the social, political, and commercial relations of Great Britain. By Mrs. Loudon, of Leamington Spa. 1835; 8vo, pp. 312.

We are greatly obliged to the correspondents who have sent us lists of the successful candidates, and the prizes awarded to them, at the University of London, the Aldersgate-street School, the King's College, and the Westminster School, but we must decline to publish them.

We cannot insert the statements of *Mr. C. F.* There would be no end to the controversy which their publication would elicit. As for the purloining of matter from Mr. F.'s manuscripts, it appears to us that what Mr. F. regards as *his* matter, was anybody's matter, none of it being original. The advertisement must be replied to by advertisement—free from libel.

Mr. Bird was certainly exceedingly ill-treated, but the publication of his letter would procure him no *amende*. His attorney could tell him the probable result of a legal application for recompense.

A Country Subscriber.—The country papers abound with similar advertisements. The success or failure of the advertisers is in the hands of the profession. When medical reform has placed the power of admitting new candidates for practice in the hands of a competent, disinterested, and protective tribunal, and the profession becomes united in a protective bond, the mischief will find a remedy, but not before.

T. H.—We have not seen the minim syringe proposed by Mr. Alsop.

No. 2 must oblige us when he writes, by expressing his ideas in briefer sentences. With every disposition to promote his objects, such a perfect diarrhœa of words will prevent us from acting upon our wish. It will be good policy also, in aiming to obtain *readers*, to act upon our suggestion.

ERRATA.—In leader, page 266, col. 2, line 11, *for* its laxity, *read* the laxity. In Mr. H. W. Dewhurst's letter, last week, *for* as a proof of my upholding quackery, *read* my not upholding quackery. (This was Mr. D.'s own error.)